Department of Health and Human Services
Office of Information Resources Management
Office of the Assistant Secretary for Management and Budget

HHS INFORMATION TECHNOLOGY STRATEGIC FIVE YEAR PLAN

October 9, 2001

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Executive Summary

With the start of this Administration, the HHS Secretary has promoted a "One Department" philosophy to govern management decisions. The Secretary has stated that Information Technology (IT) is the key to providing better government services at reduced costs and that it is the foundation for efforts to re-engineer HHS. His goal is to administer HHS= information technologies as a single corporate enterprise. In furtherance of this direction, on May 31 the Secretary specifically called for the development of a five-year Enterprise Information Technology Plan for establishing an "effective enterprise architecture and for achieving an optimal level of integration and consolidation of cross-functional and administrative systems such as financial management."

This Plan has been developed through an enterprise-wide process involving dozens of business functional managers, IT leaders, and IT technical experts and will continually evolve throughout implementation. The Workgroups responded to the Secretary=s vision by developing a plan and timetable to improve significantly the quality, performance, reliability, and security of HHS information services in support of HHS' programs and provision of services to stakeholders, partners, customers, and the public. The Plan establishes specific goals, performance measures, project plans, milestones, and resource requirements. The unified systems and uniform technologies described in this Plan are intended to produce infrastructure, processes, and systems that span all of HHS. The implementation of this Plan will ensure that the Department is adequately structured and equipped for efficient and effective use of information technology. Implementation strategies for individual projects will be developed and prioritized based on impact and value to HHS and its customers. The underlying principle of an enterprise approach to all projects in the Plan will help ensure effectiveness, efficiencies, integration, economies of scale, and consolidation. The Plan is based on a set of guiding principles including:

- All IT projects will be in support of "One Department."
- Accountability, vision, ability, resources, and leadership are equally important to success.
- An inventory of IT assets is a critical element of HHS' strategic IT management.
- IT must be continuously aligned with and in support of the program missions.
- Management of HHS' IT implementation requires timetables that include detailed incremental deliverables and milestones, sub-project interdependencies, and overall project completion dates.
- Measurable efficiencies and economies of scale must be achieved in order for the Department's IT initiatives to succeed. Consolidation is an essential component of HHS' information technology architecture.

IT infrastructure and crosscutting administrative systems are the main focus of this Plan. HHS has over 1,000 significant IT projects already underway or planned, including over 700 dealing with E-Gov, approximately 283 major mission critical systems, 36 major IT infrastructure areas, and 8 major administrative systems. For ongoing IT operations, current projects, and new initiatives to be successful within a finite resource environment, the Plan's implementation decisions must take into account internal and external project priorities such as:

- Statutory requirements;
- Strategic enterprise projects already underway;

- Strategic decisions already made, e.g., Unified Financial Management System;
- Projects that are foundational to other initiatives or projects;
- Quick solutions that have important positive impacts including positive returns on investment.

Consolidation, as one of the Guiding Principles, will result in:

- Building the Department's enterprise-level competencies in operating and managing unified, standardized, technological solutions;
- Bolstering and scaling up successful IT implementations at consolidation sites by deploying their capabilities throughout the Department;
- Freeing resources, including workforce resources, previously expended on smaller implementations, allowing those resources to be leveraged in the solution of new challenges;
- Simplifying and unifying the HHS IT infrastructure, enabling cohesive and effective management of technology resources.

Key results to be achieved in FY 02:

Begin Network Modernization

$ Identify and address critical network requirements to support other parts of the Plan;

$ Initiate aggregation of circuits to decrease duplication through inter-agency consolidation of duplicate circuits in 5 of the 10 cities where HHS has regional offices;

$ Establish a common network with sufficient bandwidth and support for open standards such that all current and future HHS applications can operate, as needed;

$ Begin implementation of a standardized HHS common network for data/video/voice;

Protect the HHS IT Environment from electronic threats by

$ Expanding HHS-wide 24/7 monitoring for identification of security threats and breaches;

$ Implementing robust perimeter protection throughout the HHS Internal Network;

$ Expanding multi-tiered virus protection HHS-wide including licensing of virus protection for all desktop computers in HHS;

Expand the ability to conduct business and serve customers electronically by:

$ Initiating public key infrastructure (PKI) activities (strong electronic authentication);

$ Cross certifying the HHS Certificate Authority with the Federal PKI Bridge;

$ Beginning to issue Digital Certificates for PKI-Enabling Applications within HHS;

Establish HHS Enterprise Directory for Headquarters (OS, AoA, ACF) and then begin:

$ Synchronize with external data source;

$ Maintain as a mission critical service;

Ensure that IT Systems are Accessible to Persons with Disabilities. This includes:

$ 100% Compliance for most frequently Accessed HHS Web-based Information.

Establish HHS Enterprise Asset Inventory:

- Implement a uniform Department-wide system and procedures for automated collection of IT asset inventory data;
- Complete initial baseline inventory of HHS IT assets;
- Implement regular and periodic reporting procedures for HHS IT asset information.

Identify and Implement Significant IT Server and Service Consolidation:

- Reduce number of servers by 10% Department-wide by end of FY 2002, based on the server counts currently in circulation;
- Define plans and timetables at the agency level to optimize via consolidation the number of e-mail, print, and file servers in each agency;
- Implement twice-annual reporting process for agency feedback to the Secretary, DHHS, on inter/intra agency IT server and service consolidation accomplishments.

Successful accomplishment of these projects will be achieved through the following critical success factors:

$ Identification and provision of key resources (staff and finances) as well as opportunities for consolidation;
$ Governance structure and processes including enterprise and project-level capital management, architecture planning, configuration and change management, and monitoring and evaluation;
$ Continuing collaboration, communication, and cooperation across HHS organizations;
$ Establishing an effective communication plan.

HHS has already partially achieved some of these goals and actions and their completion may not require the extent of resources or time indicated. This will be determined through the implementation phase. While the Plan over five years projects costs of $1.1B, as each of these Plan initiatives are further refined and business cases and project plans are developed, more specific analyses will reveal additional business impacts, returns on investment, cost savings and other tangible and intangible benefits.

Accountability

HHS undertakes the projects in this strategic plan in order to produce systems, processes, and outcomes that will help fulfill the many missions of the Department. Given the importance of these projects, it is imperative that clear lines of accountability and responsibility be drawn. In this context, accountability includes the following roles:

- Incremental deliverables and timetables for the project;
- Consensus building among the Agencies;
- Contract management for implementation contracts;
- Budget tracking for the project;
- Responsibility for the successful completion of the project.

In order to address this requirement, the HHS CIO will develop and implement a process of project accountability and use that process to identify the positions that are responsible for each of the projects in the Plan. For example, accountable for a particular project may be the HHS CIO, manager of a Project Management Office, or the CIO of the "Lead Agency" for the project. By March 31, 2002, each project in this Plan will have a clear identification of who is accountable for the success of the project.

1 CROSS FUNCTIONAL

1.1 UNIFIED FINANCIAL MANAGEMENT SYSTEM (UFMS)

The Department of Health and Human Services (HHS) currently operates five accounting systems that do not leverage up-to-date technology. Also, the expertise needed to maintain these large, complex systems is limited to a few individuals. As part of the HHS modernization effort, on June 14, 2001, the Secretary directed that the number of financial management systems be reduced from five to two modern accounting systems. The initial planning for this project known as the Unified Financial Management System (UFMS) is detailed in this document and includes defining the mission, scope, strategies, and milestones.

The UFMS consists of (1) CMS (formerly HCFA) Healthcare Integrated General Ledger Accounting System (HIGLAS) project, (2) HHS Corporate System for all HHS agencies except CMS, and (3) HHS Financial Consolidated Reporting System. The UFMS also includes the integration of other administrative functions including travel management, property, logistics, acquisition/contracts, and grants. The purpose of this endeavor is to achieve greater economies of scale, eliminate duplication through consolidation, and provide better service delivery, all of which fulfill the goals of the Secretary's initiative. Other HHS-wide system efforts, such as Enterprise Infrastructure Management (EIM) and Enterprise Human Resource and Payroll (EHRP), will be coordinated with this project.

The strategy to develop and implement the UFMS across HHS will involve development of a business case and multiple strategic plans. Under the direction of the Secretary, this coordinated effort will be accomplished by establishing a Program Management Office (PMO) and a Steering Committee (SC), both under the auspices of the Office of the Assistant Secretary for Management and Budget (ASMB). The PMO will have direct oversight of the cross-functional issues within the UFMS. The SC, composed of representatives of the Agencies, will advise ASMB on policy issues regarding the UFMS. In a further effort to assure that all interested parties have input in the development process, teams covering specific administrative and functional areas will be formed.

UFMS is a large, challenging project, requiring extensive coordination and evaluation. Because the systems will be using commercial off the shelf (COTS) enterprise software applications, business practices in these administrative areas will need to adapt to the COTS processes, requiring coordination across functional areas. This may require changes to existing HHS financial and administrative policies. A Departmental Independent Verification and Validation (IV&V) contractor will be utilized to assure the integration of HHS-wide requirements.

> The proposed timelines are based on planning as of August 1, 2001 and will be refined throughout the UFMS lifecycle. This multi-year effort has already begun and will continue through FY 2007. Timelines include establishing the PMO in Aug 2001, and deployment beginning in Oct 2002 followed by a "roll-out" to all HHS agencies and Medicare contractors through 2007.

In defining the overall UFMS project, certain assumptions were made. They include that (1) federal human resources are available to adequately staff and potentially backfill for UFMS Federal personnel, (2) UFMS Federal personnel may travel as required, (3) adequate contractor

assistance is available, (4) compliance with all HHS IT security regulations is maintained, and (5) sufficient funding is available.

1.1.1 Background

The Department of Health and Human Services (HHS) currently operates five accounting systems for its 13 operating divisions (OPDIVs/Agencies). These systems do not leverage up-to-date technology and do not efficiently meet legislated financial management requirements. In addition, the expertise needed to maintain these large, complex systems is limited to a few individuals with knowledge of the programs written in legacy computer languages.

> In the June 14, 2001 memorandum on the Unified Financial Management System (UFMS), the Secretary directed that the number of financial management systems be reduced from five to two modern accounting systems: one for the Centers for Medicare & Medicaid Services (CMS) [formerly known as HCFA] and the Medicare Contractors, and the other to serve the rest of the Department. The Secretary also directed that accounting services be consolidated by establishing a single accounting operation for HHS. These accounting services will include, at a minimum, traditional accounting functions such as bill paying, voucher examination and travel voucher payment. The purpose of this endeavor is to achieve greater economies of scale, eliminate duplication, and provide better service delivery.

The Secretary's directive is consistent with the context of the Clinger-Cohen Act and OMB Circular A-130, whose requirements are incorporated into the HHS IRM Guidelines for Capital Planning and Investment Control dated January 8, 2001 (HHS-IRM-2000-0001-GD), as well as with OMB Circular A-127 and the Joint Financial Management Improvement Program (JFMIP).

1.1.2 Scope

The UFMS consists of (1) CMS (formerly HCFA) Healthcare Integrated General Ledger Accounting System (HIGLAS) project, (2) HHS Corporate System for all HHS agencies except CMS - HIGLAS, and (3) HHS Financial Consolidated Reporting System (a data repository for consolidating data from all HHS agencies).

The UFMS will include other administrative functions, however, the initial deployment will be focused on the core financial systems. Each of the major functions will be fully integrated with one another. To assure that risk is minimized, each of the functions will be deployed on a staged basis. Administrative functions include travel management, property, logistics, acquisition/contracts, and grants and will be included within the initial design of the system. Particular attention will be paid to coordinating the UFMS project with other HHS-wide system efforts, such as Enterprise Infrastructure Management (EIM) and Enterprise Human Resource Planning (EHRP).

This is a multi-year effort that has already begun and will continue through FY 2007. Throughout the implementation process, each of the agencies will be using a common approach

to eliminate duplication of effort and leverage lessons learned. This will be done in a manner consistent with the workforce planning and restructuring effort.

1.1.3 UFMS Strategy

The strategy to develop and implement the UFMS across HHS will involve development of a business case and multiple strategic plans. Under the direction of the Secretary, this coordinated effort will be accomplished by establishing a Program Management Office (PMO) and a Steering Committee, both under the auspices of the Office of the Assistant Secretary for Management and Budget (ASMB). The PMO will have direct oversight of the cross-functional issues within the UFMS. The Steering Committee, composed of representatives of the Agencies, will advise ASMB on policy issues regarding the UFMS. In a further effort to assure that all interested parties have input in the development process, teams covering specific administrative and functional areas will be formed.

1.1.3.1 Program Management Office (PMO)

This is a large, challenging project, requiring extensive coordination and evaluation. The PMO will be responsible for the oversight of the UFMS. Because the systems will be using commercial off the shelf (COTS) enterprise software applications, business practices in these administrative areas will need to adapt to the COTS processes, requiring coordination across functional areas.

The PMO will:

1. Serve as a focal point for (1) overseeing the design, development, and implementation of the UFMS; and the development of life-cycle and budgetary plans; (2) monitoring the milestones and schedules as well as budget expenditures; and (3) the mediation and coordination of activities throughout all levels of HHS.
2. Ensure that all Federal accounting concepts and standards, as well as all HHS accounting policies and procedures are implemented throughout the UFMS.
3. Ensure that business requirements are met, the future direction of the initiative is consistent with HHS planning, and the status of the project is communicated to internal and external organizations.
4. Oversee a comprehensive program of change management that includes departmental communication, training plans and human resource issues.
5. Coordinate with workgroups/project teams to maximize the input from the cross-functional areas of HHS throughout the process.
6. Oversee all risk management plans to ensure that risks are identified and mitigation strategies are developed.

1.1.3.1.1 Information Technology Investment Review Board (ITIRB) Business Case Strategy

The PMO will assure a business case(s) will be developed and include complete definition of the problem. The business case(s) will be consistent with HHS guidelines, and will include plans for the project and schedule, risk assessment and mitigation, technical strategy, performance measurements, spending, procurement, return on investment (ROI) and cost-benefit/alternatives analysis.

1.1.3.1.2 Governance Strategy

The overall governance structure will be representative of the organizations that will be supported by the project. This will be accomplished through the use of teams consisting of specialists supporting the financial management, information technology and various administrative/functional areas. These teams will possess sufficient authority to resolve issues in a timely fashion. This will be a coordinated effort with the UFMS and other HHS-wide system efforts, e.g. EIM and EHRP. An HHS-wide Configuration Management Board for the UFMS will also be established.

1.1.3.1.3 Change Management Strategy

The change management plan will be based on an analysis, identifying stakeholder groupings and how they are impacted by the UFMS deployment over time. Based on this analysis, the change management plan will include strategies for communication, training, user acceptance, and a high-level staff transition plan that addresses changes in workload.

1.1.3.1.4 Communication Strategy

A communication strategy will be developed that supports the Secretary's vision and mission. The key audiences that will be kept informed of the UFMS progress will include internal and external entities. The PMO will establish a working relationship with the CFO and CIO communities to ensure coordination of the UFMS efforts and direction.

1.1.3.1.5 Performance Measurement Strategy

Performance measures will be established to demonstrate a successful outcome by designating accountability and through striving for quantifiable results. A Departmental Independent Verification and Validation (IV&V) contractor will be utilized to assure the integration of Department-wide requirements.

1.1.3.1.6 Acquisition Strategy

All acquisitions will follow the rules set forth in the Federal Acquisition Regulation. The strategy will be to modify and expand those existing acquisitions which can be used to support the execution of this plan and to award new contracts as needed. Contract

support will be needed for acquiring various products and services, such as systems integrators, IV&V contractors and possible additions to licenses.

1.1.3.2 UFMS Implementation

The HHS UFMS consists of two systems for core financials: one for CMS and the other for the rest of the Department. For administrative systems outside core financials, all agencies have been directed to work toward an integrated solution within the UFMS. This document addresses the HHS Corporate Approach, CMS Approach and the HHS Financial Consolidated Reporting Strategy.

1.1.3.2.1 HHS Corporate Approach

The HHS Corporate Approach involves the design of the organizational and financial model driven by the goals and objectives and functional requirements that have been defined. It is premised on the involvement of all the teams from the individual business areas. All current and future administrative business systems will be designed to accommodate interfaces with the UFMS. To avoid software customization with its inherent increased cost and risk, every effort will be made to adjust HHS business processes and practices to those anticipated by the product. Additionally, there will be every attempt not to delay the NIH deployment plan already in place. Legacy system retirement will be included as part of the UFMS planning and will not occur until completion of successful testing and implementation.

The high level HHS Corporate Approach will:

1. Define and resolve critical issues, such as the accounting classification structure and the use of HHS transaction codes. This issue must be completed prior to individual processes being tested.
2. Complete requirements and fit/gap analyses for core accounting and other administrative areas for each Agency. This must include identification of interfaces required outside of UFMS.
3. Obtain relevant training.
4. Test individual processes within a business function.
5. Design and develop a HHS architectural model to accommodate HHS business and financial functions including interfaces (i.e., payroll and grants).
6. Perform a set of integration tests to assure the compatibility of the various business processes.
7. Deploy initial “proof of concept”.
8. Continue deployments.

1.1.3.2.2 CMS Approach

The goal of HIGLAS is to deploy an integrated, enterprise-wide financial management solution to support (1) administrative and (2) program-related financial management needs of both the Federal and the Medicare/Medicaid sides of the CMS mission, respectively. HIGLAS will

address accounting practices and issues raised by various GAO and OIG audit findings, while applying best practices in financial management systems acquisition and implementation.

HIGLAS will be designed to accommodate interfaces with the UFMS. To avoid the risk of customizing the software, every effort will be made to adjust CMS business processes and practices to those anticipated by the product. Legacy system retirement will be included as part of the UFMS planning and will not occur until completion of successful testing and implementation.

The high level CMS approach will:

1. Define and resolve critical issues, such as the accounting classification structure and the use of HHS transaction codes, with other HHS Agencies.
2. Complete requirements and fit/gap analysis and include identification of interfaces required outside of UFMS.
3. Obtain relevant training.
4. Design and develop a CMS architectural model to accommodate HHS business and financial functions including interfaces (i.e., payroll and grants).
5. Integrate HIGLAS concept of operations
6. Deploy system in a phased approach.

1.1.3.2.3 HHS Financial Consolidated Reporting Strategy

HHS requires consolidated financial and performance data from all of its Agencies to address internal, as well as external reporting needs and inquiries. Individually, each agency is required to provide HHS with reliable, accurate and complete data for consolidation. To facilitate such data consolidation, HHS and its agencies will develop a system to consolidate Agency financial, performance and other data, along with HHS specific data.

1.1.4 Timeline-Milestones

Timelines are based on planning as of August 1, 2001 and will be refined throughout the UFMS lifecycle.

1.1.4.1 Program Management Office:

- Established – Aug, 2001
- Operational – Until Sept, 2004
- Shifts to ASMB, Office of Finance – Sept, 2004 and outyears

1.1.4.2 HHS Corporate Approach:

- Agency UFMS participation – Aug, 2001 – Sept, 2007

- HHS-wide Requirements – Aug, 2001 – Jan, 2002
- COTS Fit/Gap Analysis – Sept, 2001 – Jan, 2002
- Uniform Accounting Classification Structure – Sept, 2001 – Jan, 2002
- Configuration Fit/Gap Analysis – July, 2002 – Oct, 2002
- Proof of Concept (NIH):
- Budget formulation, funds distribution and standard general ledger - Oct – Dec 2002
- Travel, property, accounts receivable and funds certification – July-Sept 2003
- Phased deployment of multiple service and supply fund activities - Aug 2003 – Sept 2004
- Acquisition, supply, accounts payable and budget planning July – Sept 2004
- Continued Deployment (remaining agencies) – 2nd Quarter, FY2002 – FY2007 (Specific deployments TBD)

1.1.4.3 CMS Approach:

- Completed – Requirements analysis, current state analysis, gap analysis
- HIGLAS Systems Integration Contract Award – September, 2001
- Medicare Pilots – October, 2001 - March, 2003
- Deployment to all Medicare Contractors – Complete 2007
- Administrative Accounting Replacement – April, 2003 – Sept 2005

1.1.4.4 HHS Financial Consolidated Reporting Strategy:

- Start Requirements – September, 2001
- Start Implementation– September, 2003

1.1.5 Resources

Unified Financial Management System Summary Sheet for FY2001 IT 5-year Plan FY 2001-2006							
Agency	*FY2001*	*FY2002*	*FY2003*	*FY2004*	*FY2005*	*FY2006*	*UFMS Project*
ACF	101	410	396	697	5,287	3,569	10,460
AHRQ	15	56	514	814	88	66	1,553
AoA	7	28	407	247	46	33	768
CDC\ATSDR	3,485	10,000	10,000	3,010	2,000	700	29,195
CMS	330	875	1,675	1,175	425	425	4,905
FDA	260	8,300	8,300	10,770	6,050	1,280	34,960
HRSA	191	767	977	995	9,282	7,209	19,422
I H S	697	1,316	895	997	1,673	12,530	18,108
NIH	170	365	570	440	2,250	2,250	6,045
OS	124	504	617	6,118	4,707	721	12,791
PSC		-	-	-	-	-	-
SAMHSA	30	129	168	1,559	1,046	171	3,103
Total	**5,410**	**22,750**	**24,520**	**26,821**	**32,855**	**28,954**	**141,310**
NIH	19,100	21,200	21,730	13,779	6,322	6,183	88,314
Sub Total	***24,510***	***43,950***	***46,250***	***40,600***	***39,177***	***35,137***	***229,624***
PMO costs	80	380	400	400	275	-	1,535
Sub Total	***24,590***	***44,330***	***46,650***	***41,000***	***39,452***	***35,137***	***231,159***
CMS	21,550	59,500	60,700	71,591	66,755	67,004	347,100
TOTAL	**$ 46,140**	**$ 103,830**	**$ 107,350**	**$ 112,591**	**$ 106,207**	**$ 102,141**	**$ 578,259**

Note: The costs for implementation in the PSC are distributed to the PSC Customers budget numbers.

Note: FTE Budget dollars are included in the NIH and CMS project budget. FTE budget dollars are not included for all other agencies. They are currently in the base of the agencies' budgets and will be identified later as the full project plan is developed.

Note: These budget numbers represent an ERP implementation for NIH and CMS. The budget numbers for CDC, FDA, PSC and their customers (ACF, AoA, AHRQ, IHS, OS and SAMHSA) represent a financial systems implementation.

1.1.6 Assumptions

- Federal human resources are available to adequately staff and potentially backfill for UFMS Federal personnel
- UFMS Federal personnel may travel as required
- Adequate contractor assistance is available
- Complies with all HHS IT security regulations
- Sufficient funding is available

1.1.7 Definitions

- Program Management Office – Responsibilities include: (1) the financial, human resources and technical oversight of the UFMS from the aspect of HHS as a whole, (2) coordination of administrative and functional area requirements and project teams, and (3) independent validation and verification (IV&V) that all HHS requirements have been appropriately addressed.
- Departmental IV&V – An independent verification and validation of the entire UFMS project to predict, assess and document the extent to which the project meets planned schedules and budgets. Accomplished by reviewing and inspecting deliverables to assure that software, services, documents or other products conform to contract requirements and are delivered as planned, and that software satisfies testing for performance and other factors.
- Agency or Project IV&V – An independent verification and validation at the Agency-level.
- HHS Corporate Approach – An overall strategy, based on the Secretary's vision, for a single financial management system, which integrates Travel, Procurement, Grants, etc. It may also include other HHS initiatives.
- Financial Management – Supports budget planning and execution, funds distribution, and certification, accounts receivable and payable, cost management, financial reporting and standard general ledger activities.
- Acquisition – Includes purchase cards, station support contracts and purchase orders, research contracts, and Internet procurement.
- Supply – Provides support for central inventory management, distribution and cost recovery, and for the operation of self-service stores.
- Travel – Offers order management and payment services for local, foreign, domestic, patient and sponsored travel and change-of-station.
- Property – Tracks accountable assets, applies asset capitalization and depreciation expense as appropriate, and tracks asset maintenance scheduling, repair and warranty data.
- Service and Supply Fund – Controls internal order management and billing services for government operated working capital funds.
- COTS Fit/Gap Analysis – Analysis of the software to determine whether it satisfies the requirements ("fit") or fails to meet the requirements ("gap").
- Configuration Fit/Gap Analysis – Analysis of the software, containing the accounting rules, to determine whether it satisfies the requirements ("fit") or fails to meet the requirements ("gap").

- Proof of Concept – Process through which a design is shown to meet specified requirements in an operational environment.
- Information Technology Investment Review Board (ITIRB) – a review of information technology investment planning in a formalized structure by a senior level board comprised of the CIOs of all Agencies and led by the ASMB.

2 ENTERPRISE HUMAN RESOURCES AND PERSONNEL (EHRP) SYSTEM AND PAYROLL AND TIME AND ATTENDANCE SYSTEM

The Department of Health and Human Services' Program Support Center (PSC) provides human resources system support and payroll for 65,000 employees. The current Human Resources (HR) System is over 30 years old and must be replaced. It is built on Wang equipment that is no longer manufactured or supported. The legacy system utilizes Cobol programming which is no longer used to develop software or systems. The PSC is currently salvaging parts to keep the system running. Due to the labor-intensive requirements to operate and maintain the system, it has become increasingly difficult for PSC to maintain current operating costs and customer service.

In 1999, the Department's Agencies began the analysis to replace the legacy HR and payroll system. The PSC contracted with Booz-Allen Hamilton to conduct an alternatives analysis of possible solutions and make a recommendation on the best alternative for the Department. When the analysis was completed in 1999, Booz-Allen Hamilton recommended that the best solution would be to use a PeopleSoft HR commercial-off-the-shelf (COTS) software to replace the legacy system.

In FY 2000 after a Fit Analysis was conducted on the Peoplesoft product, Peoplesoft was purchased and the EHRP initials phases began.

PeopleSoft Human Resources is a global HR module that permits customers to build a fully integrated employee database to share across the enterprise. Tailored by the vendor to meet the needs of the U.S. Federal Government, the PeopleSoft HR module supports specific Federal Government requirements such as Within-Grade-Increase actions, SF-52 Personnel Action Requests, SF-182 Certification of Training, and diversity and affirmative action programs.

Additionally, Booz-Allen Hamilton recommended that the best solution to replace the legacy pay system would be to use a PeopleSoft Pay commercial-off-the-shelf (COTS) software. The Steering Committee voted to replace the pay system with PeopleSoft Pay. The PSC ITIRB concurred with the Steering Committee.

One of the major benefits of PeopleSoft Pay is that it is equipped with a time and attendance system. Thus, a successful deployment of PeopleSoft Pay would also serve to consolidate the Department's four time and attendance systems. Currently the Department is in the process of phasing one system (TAIMS) out and replacing it with the Integrated Time and Attendance System (ITAS); while CDC and FDA are currently running their own time and attendance systems.

2.1.1 HHS EHRP Vision

An integrated, Web-based HR/Payroll system that provides managers and employees with intuitive, user-friendly, real-time desktop access to strategic HR information and processes. The

EHRP initiative furthers the Department's IT goals and principles, notably in the areas of enterprise, architecture consolidation, and creation of a "One-Department" infrastructure.

2.1.1.1 Goal 1 Streamline operations by eliminating existing legacy HR system

2.1.1.1.1 Performance Measure:

- Initial Human Resource operating capability (IOC)

2.1.1.1.2 Action Steps:

- Develop interface to legacy pay system
- Conduct tests
- Develop training materials
- Train IOC users
- Develop staff transition plan

2.1.1.1.2.1 ***Target Date****: February 2002*

2.1.1.1.2.2 New Resources*:*

2 FTEs + contract for development of training materials and delivery = $2.2M + itemized Agency resources below. **(These new resources are rolled into the costs in the following tables for FY 02)**

2.1.1.2 Goal 1.A Provide timely and reliable payroll service

2.1.1.2.1 Performance Measure:

99.8% paid on time and correctly

2.1.1.2.2 Action Steps:

- Conduct risk analysis for extension of legacy system life
- Determine most effective implementation strategy
- Develop business plan for implementation strategy

2.1.1.2.2.1 ***Target Date****: January 2002*

2.1.1.2.2.2 New Resources:

2.1.1.2.2.3

Contractor to conduct risk analysis and develop implementation plan **(These new resources are rolled into the costs in the following tables for FY 02)**

Total Cost

FY 2002 Figures	
EHR – Core	**Cost**
FTE Costs (47.5)	$4,700,000
Contractor Costs (37)	$7,400,000
Original EHRP Investment	$5,600,000
Contract Training Materials and Delivery	$2,200,000
OPDIV Investment	
FDA	$850,000
NIH	$1,479,000
CDC	$2,309,234
HRSA	$250,000
SAMHSA	
ACF	
OS	
PSC	
AHRQ	
HIS	
CMS	
AOA	$28,653
Core Subtotal	**$23,725,887**

FY 2002 Figures EHR - Non Core	Cost
Employee Self-Service	$1,200,000
Comm Corps Position Mgt Only	$700,000
Change Management	$500,000
Non-core FTEs	$300,000
OPDIV Investment	
FDA	
NIH	$16,000,000
CDC	
HRSA	
SAMHSA	
ACF	
OS	
PSC	
AHRQ	
HIS	
CMS	
AOA	
Non-core Subtotal	**$18,700,000**
Core-Noncore Total	$43,516,887
Payroll + Time and Attendance	
12 FTEs (9 original + 3 requested)	$1,500,000
Risk analysis and implementation plan	$500,000
Payroll + T&A Subtotal	$2,000,000
Total	$44,425,887

OPDIV Staffing Costs **

FY 2002 Cost Needed for Staff (in millions)				
Agency	Core		Non-core	
	FTE Cost	Contractor Cost	FTE Cost	Contractor Cost
FDA	.7	1	TBD	TBD
NIH	1.4	2	TBD	TBD
CDC	.7	1	TBD	TBD
HRSA	.1	.2	TBD	TBD
SAMHSA		.1	TBD	TBD
ACF		.1	TBD	TBD
OS		.1	TBD	TBD
PSC		.1	TBD	TBD
AHRQ		.1	TBD	TBD
HIS	1.4	2	TBD	TBD
CMS	.4	.6	TBD	TBD
AOA		.1	TBD	TBD
Total	4.7M	7.4M		

**We are unable to determine if OPDIVs have included FTE/contractors costs as part of their EHRP budget. This table assumes that FTE/contractor costs are an additional charge to OPDIVs.

2.1.1.3 Goal 2 Achieve Department-wide full Human Resource operating capability (FOC)

2.1.1.3.1 Performance Measure:

100% of Agencies deployed

2.1.1.3.2 Action Steps:

- Identify processes to be streamlined
- Train rest of EHRP system users
- Assist Agencies with completion of deployment checklist
- Develop schedule
- Deploy sites in accordance with schedule
- Begin non-core add on

2.1.1.3.2.1 ***Target Date****: February 2003*

2.1.1.3.2.2 ***New Resources:***

2 FTEs to manage change management and training delivery = $200K. **(These new resources are rolled into the costs in the following tables for FY 03)**

2.1.1.4 Goal 2.A Keep Legacy Pay System Operational through FY 2006

2.1.1.4.1 Performance Measure:

Legacy system continues to pay on time

2.1.1.4.2 Action Steps/New Resources

3 FTE, historical database, reengineer and re-platform Wang applications and equipment replacement **(These new resources are rolled into the costs in the following tables for FY 03)**

2.1.1.5 Goal 3 Provide broad-based reporting capabilities for managers

2.1.1.5.1 Performance Measure:

Managers have desktop access to reports

2.1.1.5.2 Action Steps:

- Identify required reports
- Develop reports
- Set-up reporting database
- Provide access to database
-

2.1.1.5.2.1 ***Target Date****: February 2003*

2.1.1.5.2.2 ***New Resources:***

Contractor support to develop reports = $500K**(These new resources are rolled into the costs in the following tables for FY 04)**

2.1.1.6 Goal 4 Expand non-core functionality

2.1.1.6.1 Performance Measure:

- Automation of new functions
- Increased quality of service
- Increased time for strategic work by HR professional

Identify additional non-core functions:

- ***Recruitment and selection***
- ***Performance Management***

  - PeopleSoft Historical Database
  - Reporting Cubes
  - Reports Software License
  - Benefits Administration
  - Training Administration
  - Skills/Competency Management

2.1.1.6.1.1 ***Target Date****: February 2006*

2.1.1.6.1.2 ***New Resources:***

Itemized below

FY 2003 Figures		FY 2004 Figures	
EHR – Core	**Cost**	**HER - Core**	**Cost**
FTE Costs (20)	$2,000,000	FTE Costs (10)	$1,000,000
Contractor Costs (10)	$2,000,000		
Original EHRP Investment	$360,000		
Subtotal	**$4,360,000**	**Subtotal**	**$1,000,000**

FY 2003 Figures		FY 2004 Figures	
EHR - Non Core	**Cost**	**EHR - Non Core**	**Cost**
		Benefits Administration	$600,000
Contractor Support to develop reports	$500,000	Training Administration	$1,000,000
2 FTEs for change management and training delivery	$200,000	Skills/Competency Management	$1,300,000
Recruitment/Selection	$1,400,000		
Performance Management	$600,000		
PSoft Historical Database	$2,000,000		
Reporting Cubes	$2,000,000		
Reporting Software	$1,000,000		
		OPDIV Investment	
OPDIV Investment		FDA	
FDA	$850,000	NIH	$12,226,000
NIH	$21,702,000	CDC	$2,029,127
CDC	$3,623,138	HRSA	
HRSA	$900,000	SAMHSA	
SAMHSA		ACF	
ACF		OS	
OS		PSC	
PSC		AHRQ	
AHRQ		IHS	
IHS		CMS	
CMS		AOA	$31,000
AOA	$29,800		
Subtotal	**$34,804,938**	**Subtotal**	**$17,186,127**
Core-Noncore Total	$39,164,938	Core-Noncore Total	$18,186,127
Payroll + Time and Attendance		Payroll + Time and Attendance	$0
12 FTEs (9 original + 3 requested)	$1,500,000		
Historical Database	$2,000,000		
Reengineer and Re-platform Wang applications	$2,000,000		
Equipment replacement	$500,000		
	$6,000,000		
Total	**$45,164,938**	**Total**	**$18,186,127**

FY 2003 Cost Needed for Staff (in millions)				
Agency	Core		Non-core	
	FTE Cost	Contractor Cost	FTE Cost	Contractor Cost
FDA	.3	.2	TBD	TBD
NIH	.5	.4	TBD	TBD
CDC	.2	.2	TBD	TBD
HRSA	.1	.1	TBD	TBD
SAMHSA		.1	TBD	TBD
ACF		.1	TBD	TBD
OS		.1	TBD	TBD
PSC	.2	.1	TBD	TBD
AHRQ		.1	TBD	TBD
HIS	.5	.3	TBD	TBD
CMS	.2	.2	TBD	TBD
AOA		.1	TBD	TBD

*We are unable to determine if OPDIVs have included FTE/contractors costs as part of their EHRP budget. This table assumes that FTE/contractor costs are an additional charge to OPDIVs

FY 2004 Cost Needed for Staff (in millions)				
Agency	Core		Non-core	
	FTE Cost	Contractor Cost	FTE Cost	Contractor Cost
FDA	TBD	TBD	TBD	TBD
NIH	TBD	TBD	TBD	TBD
CDC	TBD	TBD	TBD	TBD
HRSA	TBD	TBD	TBD	TBD
SAMHSA	TBD	TBD	TBD	TBD
ACF	TBD	TBD	TBD	TBD
OS	TBD	TBD	TBD	TBD
PSC	TBD	TBD	TBD	TBD
AHRQ	TBD	TBD	TBD	TBD
HIS	TBD	TBD	TBD	TBD
CMS	TBD	TBD	TBD	TBD
AOA	TBD	TBD	TBD	TBD
Total				

FY 2005 Cost Needed for Staff (in millions)				
Agency	Core		Non-core	
	FTE Cost	Contractor Cost	FTE Cost	Contractor Cost
FDA	TBD	TBD	TBD	TBD
NIH	TBD	TBD	TBD	TBD
CDC	TBD	TBD	TBD	TBD
HRSA	TBD	TBD	TBD	TBD
SAMHSA	TBD	TBD	TBD	TBD
ACF	TBD	TBD	TBD	TBD
OS	TBD	TBD	TBD	TBD
PSC	TBD	TBD	TBD	TBD
AHRQ	TBD	TBD	TBD	TBD
HIS	TBD	TBD	TBD	TBD
CMS	TBD	TBD	TBD	TBD
AOA	TBD	TBD	TBD	TBD
Total				

**We are unable to determine if OPDIVs have included FTE/contractors costs as part of their EHRP budget. This table assumes that FTE/contractor costs are an additional charge to OPDIVs

3 ENTERPRISE INFRASTRUCTURE

3.1 ENTERPRISE INFRASTRUCTURE MANAGEMENT

3.1.1 Enterprise Infrastructure Management Overview

The effectiveness of the HHS corporate mission is measured by the reliability and performance of its underlying information technology (IT) infrastructure and business applications. Enterprise Infrastructure Management (EIM) is an operational IT management framework that will protect the HHS IT operating infrastructure by restructuring management practices, procedures, and functional boundaries, while providing automated tools to reduce both user and systems administrator workload. Enterprise Infrastructure Management is the standard process and "umbrella" enterprise architecture in which HHS information technology is managed across all of its Operating Divisions (OPDIVs). In essence, EIM is the "glue" or "wrapper" that provides IT continuity among OPDIV electronic government (E-Gov), business applications, cross-functional and administrative systems, and infrastructure utilities. EIM will facilitate measuring the effectiveness of the HHS IT infrastructure in supporting the business mission, making changes, and evaluating future IT investments based on these measures in a cost-effective manner.

The long-term goal of EIM is to provide executive management with proper centralized information to set strategic direction and provide improved service. EIM will collect and disseminate the information.

EIM is an enterprise-wide approach to Infrastructure management that will achieve the following:

1. Provides standard policies, procedures, and integrates dependent services, functions and tools;
2. Provides the mechanism to assess IT workforce restructuring and consolidation;
3. Provides real time business information;
4. Supports hierarchical enterprises with integrated monitoring/reporting and Agency management independence;
5. Provides integrated corporate management and reporting across all lines of business;
6. Answers questions about networks, systems, security, asset management, problem management and IT services across the enterprise; and
7. Links Service Level Agreements (SLAs), Standard Operating Procedures (SOPs), and maintenance agreements to the infrastructure components, contractor management, and standard product procurement.
8. Implementation of processes and system for accurate and ongoing tracking of IT inventory and assets.
9. Aggregation and standardization of IT systems and services, resulting in significant consolidation within agencies and across the Department.

3.1.2 IT Policy

The first priority for EIM is to establish standard management practices. Twelve new policies related to IT capital planning and investment control, security, PKI, and other IT practices have been developed and approved. Others are being developed. Policies regarding network management, systems management, asset management, problem management, software distribution, change management, configuration management, storage management, security management, PKI, HHS Enterprise Directory, and knowledge management will be developed and approved by December 2001.

3.1.3 IT Architecture Strategy

EIM Architecture establishes the target architecture for the Department. The appropriate EIM Architecture documents will be updated by November 2001 assuming funding and projects plans are received from OPDIVs. This will include developing an implementation plan to sequence the transition from the current state to the target department architecture.

Operation of configuration management and change management will be in place by December 2001. Please refer to the configuration management and change management sections of this plan for more detail. The outcomes of these initiatives will be that all enterprise architecture changes and investments will be documented and, when necessary, approved before implementation.

A management framework allows for the communication, collection and dissemination of information in both directions to monitor as well as integrate the business and IT decision support across the enterprises. It also provides the foundation for correlating security events. This framework provides the insight into and inventory of each organization, which will assist in potential workforce restructuring and consolidation.

In order to ensure effective communication and teamwork between the OPDIVs and the Department, an EIM Project Team has been established to plan and execute the implementation of EIM modules. The OIRM HHS Chief Architect chairs this Project Team. Each Operating Division appointed a primary representative and an alternate to attend monthly EIM meetings.

3.1.3.1 EIM Utilities

The components that make up EIM as outlined in the Plan are:

- Network Modernization
- Security
- PKI
- HHS Enterprise Directory
- Change Management
- Configuration Management
- Cross functional Systems

    - Unified Financial Management
    - Enterprise Human Resources and Payroll
- Asset/Inventory Management
- IT Resource Consolidation
- IT Workforce Restructuring
- Problem Management

3.1.3.2 EIM Program Management Function

This is a large, challenging project, requiring extensive coordination. This will be achieved through the leadership of the Chief Information Officer, the Deputy Assistant Secretary for Information Resources Management and agency CIOs across the Department. The EIM program management function will be responsible for the oversight of the Enterprise Infrastructure Management Program. Because the systems will be using commercial off the shelf (COTS) enterprise software applications, business practices in these administrative areas will need to adapt to the COTS processes, requiring coordination across functional areas. OIRM will continue to manage the program management function working together with the CIO community who will identify a cadre of staff to carry out the implementation. The program management function will:

(1) oversee the design, development, and implementation of EIM; and the development of life-cycle and budgetary plans; (2) monitor the milestones and schedules as well as budget expenditures; and (3) the mediate and coordinate activities throughout all levels of HHS. Ensure that the architectural technical requirements are met, the future direction of the initiative is consistent with HHS planning, and the status of the project is communicated to internal and external organizations. Oversee a comprehensive program of transition, sequencing, migration and change management that includes departmental communication, training plans and human resource issues. Coordinate with workgroups/project teams to maximize the input from the cross-functional areas of HHS throughout the process. Oversee all risk management plans to ensure that risks are identified and mitigation strategies are developed.

The staff assigned to this function will assure a business case(s) are updated and include complete definition of the problem. The business case(s) will be consistent with HHS guidelines, and will include plans for the project and schedule, risk assessment and mitigation, technical strategy, performance measurements, spending, procurement, return on investment (ROI) and cost-benefit/alternatives analysis.

3.1.3.2.1 Governance Structure

The overall governance structure will be representative of the organizations that will be supported by the project. This will be accomplished through the use of teams consisting of specialists supporting information technology and various technical/functional areas. These teams will possess sufficient authority to resolve issues in a timely fashion. This

will be a coordinated effort with EIM and other HHS-wide system efforts, e.g., UFMS and EHRP. An HHS-wide Configuration Management Board (CMB) for EIM has been established.

3.1.3.2.2 Change Management

The change management plan will be based on an analysis, identifying stakeholder groupings and how they are impacted by the EIM deployment over time. Based on this analysis, the change management plan will include strategies for communication, training, user acceptance, and a high-level staff transition plan that addresses changes in workload.

3.1.3.2.3 Communication Strategy

A communication strategy will be developed that supports the Secretary's vision and mission. The key audiences that will be kept informed of EIM's progress will include internal and external entities. The program management function will establish a working relationship with the CFO and CIO communities to ensure coordination of the EIM's efforts and direction.

3.1.3.2.4 Performance Measurement Strategy

Performance measures have been established to demonstrate a successful outcome by designating accountability and through striving for quantifiable results. Measurable efficiencies and economies of scale must be achieved in order for the Department's IT initiatives to succeed. Consolidation of servers and services, both intra- and inter-agency, and semi-annual reporting of consolidation accomplishments will be established.

3.1.3.3 Deliverables

EIM agency implementation plans will reflect enterprise architecture standards; provide detailed project milestones, deliverables, and dates; and meet Departmental timetables. Each agency's plan will identify the agency's approach for achieving the EIM outcomes, including IT asset inventory, network modernization, desktop configuration management, security implementation, and server/service consolidation.

EIM will establish HHS Enterprise IT Asset Inventory which will include the implementation of a uniform Department-wide system and procedures for automated collection of IT Asset Inventory data. An initial baseline inventory of HHS IT Assets will be completed by the end of FY 2002 along with regular and periodic reporting procedures for HHS IT Asset information.

Asset/Inventory Management provides an accurate inventory of IT resources in terms of hardware, software, and facilities. This would allow management to better predict future IT costs, needs, and services. It would also provide accurate identification of resources that need to

be secured, whether or not the Department is in compliance with licensing agreements, alert management when equipment has been removed from its designated network location, and link the equipment to proper service level agreements.

The Secretary is highly interested in resource consolidation and workforce restructuring as a goal to achieve more cost effective management of IT. There will be a reduction in the number of servers by 10% Department-wide by the end of FY 2002, based on the server counts currently in circulation. Once the inventory is completed, this data will be analyzed to identify opportunities to consolidate resources. A schedule will then be developed to consolidate IT resources. The IT Asset inventory data will be used to set measurable interagency and intra-agency consolidation goals for FY 03, FY 04, and FY 05 with a twice annual reporting mechanism that demonstrates progress toward these goals.

As IT resources are consolidated, workforce restructuring can occur to better support the IT operations and improve customer service. Through automation and normal attrition the quantity of IT staff could be stabilized to support the business need. As new projects are presented through the change control process and through the Department IT Investment Review Board (ITIRB), staff plans would be reviewed. At a minimum, staffing plans would be reviewed every June in preparation for Budget Formulation.

Problem management provides the capability to identify system issues, report the problem, and seek a solution. EIM problem management can improve current help desk operations and potentially consolidate level 1 (i.e., first person "front line" respondent) support. As the network is redesigned, an automated call distribution and voice response unit (ACD/VRU) solution could be installed to manage toll free services and help desk calls. (Note: The Office of the Secretary ASMB Help desk and Central network management implemented a consolidated help desk strategy in March 2001 on the current OS network.)

3.1.4 Timeline

The expected completion date of the EIM program is September 30, 2004. Specific projects of the EIM program have completion dates that must be met in order for the overall program to reach timely completion:

- Completion of the policy framework for EIM – December 2001
- Completion of Asset Inventory project – September 2002
- Completion of Information Security Priority Actions – September 2002
- Initial Enterprise Directory implementation – September 2002
- PKI (secure authentication) initial implementation – September 2003
- Network Modernization – September 2003

3.1.5 Resources

The EIM budget is comprised of the cost for the software, hardware, services, security, and networking necessary to support the EIM program. The services portion of the EIM budget will fund the FTE's, contractors, and travel that support EIM. The EIM budget will cover Department-wide EIM initiatives. The cost for Networking, Security, Enterprise Directory, and PKI are not addressed in this Section but can be found in their respective Sections in the Plan.

3.1.5.1 Services

	Contractor	Gov FTE	Cost
FY2002	30	20	$12.8
FY2003	5	20	$ 3.0
FY2004	5	20	$ 2.0
FY2005	0	20	$ 2.0
FY2006	0	20	$ 2.0
Travel/Other Cost			$ 3.8
Total			**$25.6 Mil**

The FTE's will provide additional staff in the OPDIVs in support of EIM. The FTE count is not cumulative. In FY2005 Contractor staff will not be needed. Operations and maintenance will be accomplished by government FTE's. Operating divisions have contractor expertise in-house and will have the option to use this expertise to assist in the Operations and Maintenance efforts beyond FY2004. The net increase will be zero since FTE's will be off set by normal attrition after FY2004.

3.1.5.2 EIM Program Management Function

	Contractor (New FTE's)	Gov FTE/Travel Cost
FY2002	3	$920,000
FY2003	2	3 $920,000
FY2004	2	3 $920,000
FY2005	0	7 $920,000
FY2006	0	7 $920,000
Total		**$4.6mil**

Tivoli Maintenance		Tivoli Software	
FY2001	$ 678,000.00	FY2001	$3,100,000.00[1]
FY2002	$ 721,485.00	FY2002	$10,769,611.00
FY2003	$ 833,000.00	FY2003	$ 9,533,935.00
FY2004	$ 848,000.00	FY2004	$0
FY2005	$0	FY2005	$0
FY2006	$0	FY2006	$0
Total	$3,080,485.00	Total	$23,403,546.00

(Remote software distribution, asset management, change management, security, user administration, and infrastructure framework)

1 This figure is representative of the discounts as a result of the Enterprise Licensing Agreements negotiated by the Department.

The estimates include the cost of implementing uniform automated solutions for asset management and change management. Similar modules may exist in other product suites installed in the operating divisions. Based on a thorough gap analysis of function, less cost, less risk, and equal or better customer service, it will determine if the installed modules can interface to or need to be replaced by the Department solution.

Peregrine Maintenance		Peregrine Software	
FY2002	$ 357,000.00	FY2002	$ 1,5 00,000.00[2]
FY2003	$ 080,000.00	FY2003	$ 1,500,000.00
FY2004	$ 432,000.00	FY2004	$0
FY2005	$0	FY2005	$0
FY2006	$0	FY2006	$0
Total	**$ 869,000.00**	**Total**	**$ 3,000,000.00**

(Desktop and network asset awareness, change management, problem management)

3.1.5.3 Hardware

FY2002	$ 1,125,000.00
FY2003	$0
FY2004	$0
FY2005	$ 1,125,000.00
FY2006	$0
Total	**$ 2,250,000.00**

2 This figure is representative of the discounts as a result of the Enterprise Licensing Agreements negotiated by the Department.

Hardware cost is based on the average cost of the servers that will be hosting the appropriate Tivoli and/or Peregrine software and network operating systems. Operating Divisions may or may not have the appropriate hardware in-house. It is assumed that they do not. FY2005 represents a four-year refresh period for the upgrade of the hardware.

Total = $62,803,031

3.1.6 EIM Project Team

3.1.6.1 The Mission of the Project

Establish the direction of the Department for transitioning from the existing Architecture/Infrastructure to the target EIM Architecture/Infrastructure. To facilitate the implementation of the EIM Infrastructure and Cross-Functional Systems. To establish policies and procedures, which ensure process management and continued modernization of the HHS Architecture/Infrastructure. Provide guidance for the transitioning, sequencing and migration to the target architecture through the EIM Project Team.

3.1.6.2 The Goals and Objectives of the Project

The EIM Project Team will provide direction and support for the implementation of the EIM Infrastructure and Cross-Functional Systems and establish a departmental and an agency transition plan for EIM. The transition plan will include conversion/migration from current to the target EIM technologies. EIM is a technical architecture that impacts application, business, infrastructure and data needs. It provides an interface with the security architecture and enhances the infrastructure backbone.

3.1.6.3 The Savings and/or Intended Results of the Project's Recommendations

To optimize the efforts of the Department and the individual Agencies in the conceptualization, design, development, and implementation of the EIM Infrastructure, Cross-Functional Systems, and Business Systems. This will allow aggregation and standardization of IT systems and services, resulting in significant consolidation within agencies and across the Department.

3.1.6.4 Strategy

Each agency will establish an EIM implementation plan. The EIM transition/implementation plan will be inclusive of the following:

- Implementation dates
- EIM technology implemented
- Estimated Completion Dates
- Resource Estimates (personnel, software, hardware and funding).
- Transition, sequencing and migration procedures.

The EIM program manager will interview each agency prior to implementation to assist with planning.

3.1.6.5 The Performance Measures for the Project

The target completion date for EIM is 30 September 2004. The measure of performance will be accomplished in accordance with the implementation plan submitted by the operating divisions.

3.1.6.6 Staffing

The EIM Project Team is comprised of a primary representative and an alternate from each operating division. .

The Network Modernization work group is upgrading the existing telecommunications network to meet the needs of the Department. PKI, the HHS Enterprise Directory, and various other EIM initiatives are dependant on this upgrade for telecommunications network availability.

3.2 CHANGE CONTROL BOARD INFORMATION TECHNOLOGY ARCHITECTURE (ITA)

3.2.1 The Mission of the Change Control Board

The Change Control Board initiative fulfills the goals and principles of the IT Plan by serving as a Department-wide source for IT architectural documents and architecture compliance guidance. The Information Technology Architecture (ITA) Group has transformed into the Change Control Board in support of the Departmental Information Technology Infrastructure Review Board (ITIRB). The CCB mission is to coordinate all technical level and application level architectural changes at the Department for Cross Functional projects and across the Agencies for agency level projects to ensure architectural compliance and adherence to system standards.

3.2.2 The Goals and Objectives of the Change Control Board

The Change Control Board (CCB) will review and provide architectural documentation and direction to support the Cross Functional projects and the Agency level projects in the conceptualization, design, and development of all HHS systems to insure that they are compliant with the Departmental IT Architecture and compatible with each other. The CCB will review the Alternative Analysis, Risk Management, and other Conceptual, Requirements and System Documentation for major and Cross Functional systems for compliance with the HHS IT Architecture. The CCB will work with the projects to insure the adequacy of the documentation and provide a recommendation to the ITIRB. The CCB will provide support, oversight and direction for the projects during all phases of the System Life Cycle as needed or requested.

3.2.3 The Savings and/or Intended Results of the Change Control Board's Recommendations

The CCB will provide support for the ITIRB in the decision making process and the review of major and cross-functional systems. The CCB will conduct cost benefit Analysis (CBA) and rough order of magnitude (ROM) reviews.

3.2.4 The Performance Measures for the Change Control Board

Architectural documents and guidance produced will be disseminated within 10 business days of meetings effective immediately.

The CCB will provide support and recommendations to the Departmental ITIRB on an as needed basis. The CCB will update the IT Architecture a minimum of once per year to reflect the existing infrastructure.

3.2.5 Resources

Budget	Support Contract	WEB/Printing	Total
FY2001	$ .3 Million	$ .0 Million	$ .3 Million
FY2002	$ .3 Million	$ .1 Million	$ .4 Million

FY2003	$ .3 Million	$ .1 Million	$ .4 Million
FY2004	$ .3 Million	$ .1 Million	$ .4 Million
FY2005	$ .3 Million	$ .1 Million	$ .4 Million

(meeting facilitation and minutes)

Staffing	**Support Contract**	**OIRM/OPDIVs**
FY2001	1	2.5
FY2002	1	2.5
FY2003	1	2.5
FY2004	1	2.5
FY2005	1	2.5

3.3 CONFIGURATION MANAGEMENT

3.3.1 The Mission of Configuration Management

The Configuration Management initiative fulfills the goals and principles of the IT Plan by providing the Department-wide library of the updated IT architectural documents, the history of changes, and the documented basis for the changes.

The Configuration Management (CM) Board Project Team will be chartered to provide configuration management for the IT Architecture document and all EIM documentation in support of the Departmental Information Technology Infrastructure Review Board (ITIRB).

3.3.2 The Goals and Objectives of Configuration Management

The CM Board Project Team will perform change control and version control for the HHS Architecture documentation. The CM Project will work with the projects to insure the adequacy of the documentation and that up to date versions of the documentation is available to the projects.

The Savings and/or Intended Results of the Project's Recommendations

The CM Board Project Team will provide documentation to support the Agencies in the conceptualization, design, and development of all HHS systems to insure that they are compliant with the IT Architecture and compatible with each other. The CM Board Project Team will provide documentation to support the Agencies in the conceptualization, design, and development of the Cross-Functional systems developed for the Department to insure that they meet the needs of all of the Agencies.

3.3.3 The Performance Measures of Configuration Management

Documentation produced and disseminated within 10 days of meetings. Effective Date: immediately.

> The CM Board Project Team will provide support and recommendations to the Departmental ITIRB on an as needed basis. The CM Board Project Team will update the IT Architecture three times a year to reflect the existing infrastructure.

3.3.4 Resources

Budget	Support Contract	WEB/Printing	Total
FY2001	$ .2 Million	$ .1 Million	$ .4 Million
FY2002	$ .3 Million	$ .1 Million	$ .4 Million
FY2003	$ .3 Million	$ .1 Million	$ .4 Million
FY2004	$ .3 Million	$ .1 Million	$ .4 Million
FY2005	$ .3 Million	$ .1 Million	$ .4 Million

(meeting facilitation and minutes)

Staffing	Support Contract	OIRM	OPDIVs	Total
FY2001	2	1	1 ea.	18
FY2002	2	2.5	1 ea.	18
FY2003	2	2.5	1 ea.	18
FY2004	2	2.5	1 ea.	18
FY2005	2	2.5	1 ea.	18

The Possible Barriers to Implementation of the Work Group's Recommendation/Action Plan

Staffing - current HHS staff resources are not sufficient to take on a task of this magnitude

3.4 NETWORK MODERNIZATION

3.4.1 Vision

The HHS Network Modernization initiative helps fulfill the Department's IT Guiding Principles of consolidation, including cost-saving reductions in duplicate of network components, resulting in a unified backbone serving the Department. This "one-Department" approach to Network Modernization will create the unified, managed communication infrastructure that enables other enterprise architecture initiatives, such as Security and the Unified Financial System.

To provide for the common requirements of Departmental networking, via the implementation of a high performance, scalable, cost effective, secure, standards based network for data, voice and video, consistent with best practices.

3.4.2 The Mission of Network Modernization

Identify the collective needs of the Department for data transit between facilities, campuses and agencies, and establish a plan for consolidating these links where feasible, economical and secure. To facilitate the implementation of that plan, subject to the guidance of the CIO Council. To establish systems, inventories policies and procedures, which ensure the satisfactory operation and continued modernization of the common HHS network.

3.4.3 The Goals and Objectives of Network Modernization

Identify and Resolve Short Term Critical Requirements - Identify and resolve short term critical requirements related to support of projected unified departmental enterprise systems such as the Employee Human Resources Program, the Unified Financial System, the Department directory, etc. Address and resolve short-term remote site connectivity issues where normal telecommunications access is limited.

Establish and Resolve Long Term Collective Requirements – Conduct an independent study to identify all current HHS-data transit circuits between facilities and campuses, together with precise geographic locations and technical specifications.

Over All Network Planning & Design – Analyze the requirements represented by the technical specifications, and the results of the independent study mentioned above and design a modern network that will meet current needs while providing the capability to expand in the future (including but not limited to Voice, Video Teleconferencing, Teleradiology, Telemedicine, Enterprise Unified Messaging, Internet Service, Remote Access, Wireless, Virtual Private Network, Video Streaming, and sufficient bandwidth and proper protocol support for the projected Department-wide systems such as the Employee Human Resources Program, the Unified Financial System, the Department directory, etc.). Bandwidth requirements for the unified backbone will be developed in concert with the other working groups (Enterprise Infrastructure Management, Information Technology Architecture Group, Public Key Infrastructure, Lightweight Directory Access Protocol, etc).

Plan Aggregation of Circuits, Implement & Transition - Plan aggregation of circuits - pinpoint where there is duplication, and where the Department's needs would be better served

through combining those circuits. Establish and test the new network structure, then migrate current service traffic to the new environment, as appropriate. In FY 2003 25% of the consolidation will be completed. In FY 2004 50% of the consolidation will be completed. In FY 2005 75% of the consolidation will be completed. In FY 2006 100% of the consolidation will be completed.

Operations & maintenance - Establish the necessary technical, administrative and financial structures to operate the common transport network effectively.

Specific Deliverables - Initiate aggregation of circuits to decrease duplication through interagency consolidation of duplicate circuits in five of the ten cities where HHS has regional offices.

The Benefits and Intended Results of the Project's Recommendations

A common network for data transit between all HHS facilities and campuses, wherever technically feasible, operationally desirable, secure, and fiscally wise will be established. The common network will be properly designed, with sufficient bandwidth and support for open standards such that all current and anticipated HHS applications can operate across this network, as needed. Overall, a common connectivity capability can facilitate the proper and timely implementation of departmental systems as identified throughout this document, providing better and faster service and eliminating duplication.

3.4.4 The Performance Indicators for of Network Modernization

Fiscal Year	Work Product
FY 2002	100% upgraded network to handle additional traffic for cross-functional systems: study completed and recommendations and prioritizations made
FY 2003	100% of FY 2003 goals as articulated in aggregation plan
FY 2004	100% of FY 2004 goals as articulated in aggregation plan
FY 2005	100% of FY 2005 goals as articulated in aggregation plan
FY 2006	100% of FY 2006 goals as articulated in aggregation plan

Adequate performance of this project will be demonstrated by the successful and timely delivery of the recommendations of the study, and the implementation of a common HHS transport capability. Key technical performance indicators will be defined based on the technology solution chosen. The current overall goal for implementation is to have 75% of all appropriate sites active on the common network (Data, Voice and Video) by 9/30/05.

3.4.5 Resources

3.4.5.1 Support Contract and Staffing

The project will develop a statement of work defining the scope, schedule and costs required to fund a network infrastructure analysis study. A support contract is required to conduct a thorough analysis of the existing HHS network infrastructure. The contractor will evaluate the current architecture and customer requirements; identify opportunities for beneficial consolidation of network infrastructure, and formulate recommendations in support of the vision statement. The projected cost for this support contract is $5 million, and the project is expected to take one year.

Staffing	Department Total
FY2002	24
FY2003	24
FY2004	24

Contract support must be acquired to supplement the OPDIV FTE participation. Additional dollars will be required to provide an on-going support contractor and FTEs necessary to coordinate modernization activities. These costs as well as over all network implementation costs will be defined by the study mentioned above.

Key Product	**FY2002**	**FY2003**	**Total over 5 YRS**
Independent Study	$5 million	N/A	$5 Million
*Staffing Support	$4 million	$4 million	$20 Million
*Short Term Support Contract	$6 million	N/A	$6 Million
*Long Term Support Contract	N/A	$6 Million	$24 Million
*Common Network	TBD	TBD	TBD
Data/Voice/Video Implementation			

* Note: The dollars represented here are projections by the Agencies and OIRM on probable Government and Contractor staffing levels necessary to achieve the goals and objectives outlined in this executive summary and are based on the level of work expected at this time. More specific information will be available as a result of the independent study as in the case of the Common Network Implementation line item and will include staffing level adjustments at that time.

3.4.6 Critical Success Factors

Budget - There is currently no centralized information technology or telecommunications budget available to fund the establishment or maintenance of this common network.

Staffing - Contract support must be acquired to supplement the OPDIV FTE participation.

Telecommunications facility availability - The work group will ascertain whether high bandwidth access, or local access from HHS facilities to a central location with high bandwidth access, is available in all locations necessary.

Schedule - Provided that the facilities are available on the local or national level to support the new, common network, the service providers must be given ample lead time to ensure that provisioning or provider staff availability does not impact the level of service required in any short time frame.

3.5 HHS INFORMATION TECHNOLOGY SECURITY

3.5.1 Background

The HHS IT Security initiative embodies the goals and principles set forth in the 5-year IT Plan, including consolidation of virus software licensing, development of HHS-wide security monitoring and notification services, and performance of enterprise-level risk assessments. In addition, as a step in fulfilling the "one-Department" goal, the Security initiative will implement perimeter protection for all Department-wide layers of access protection.

Information security and critical infrastructure protection are commonly recognized priorities for government agencies, including HHS. Increasing focus on security stems from new statutory requirements (e.g., GISRA, HIPAA, GPEA, GPRA, Clinger-Cohen Act, and PRA), policy directives (e.g., OMB A-130 and PDD-63), oversight and audit reports, Congressional interest, adverse events (e.g., website defacements and virus introductions), public concern over privacy, and the ever growing criticality of IT services to enable HHS mission and program operations.

This strategic plan for security does not represent the spectrum of information security requirements or activities at HHS, but rather identifies specific goals, performance measures, and actions steps to focus HHS' efforts and investments for advancing HHS' security and continuity of critical services and programs. This plan attempts to identify priority actions to achieve measurable outcomes in support of the vision. Though the plan focuses on specific steps, it is important to note that security for all of HHS information technology will be enhanced by this plan. This plan supports, but does not supercede, the requirements found in the HHS Automated Information Systems Security Program (AISSP) Handbook, HHS IRM Circular 10, and other applicable directives. Resource estimates require refinement and validation.

3.5.2 HHS Security Vision

Continuously Reliable and Secure Critical IT Services and Systems Supporting the HHS Mission

Note: HHS critical IT services are defined as the HHS-wide network linking all major HHS facilities, Internet access and HHS major public websites, HHS critical infrastructure and time-sensitive mission-critical systems, HHS-wide e-mail, and HHS telephone services (local and long distance dial tone).

3.5.2.1 Goal 1: Improve the reliability and availability of critical IT services.

3.5.2.1.1 Performance Measure

HHS-wide critical IT services will achieve 99.8% continuous reliability and availability (<18 hours of unscheduled outage/year) by FY 2006.

Note: Interim targets will be established following a baseline assessment of current performance**.**

3.5.2.1.2 Action Steps

3.5.2.1.2.1 (1.1.) Identify critical services, measure current and ongoing performance, and establish systems to monitor and track performance.

3.5.2.1.2.1.1 Target Completion Date: February 2002.

3.5.2.1.2.1.2 New Resources Required:

If manually compiled, no additional costs. If automated tools are purchased, there will be additional costs. A combined approach utilizing the first and second strategies would be required for some legacy situations.

3.5.2.1.2.2 (1.2.) Acquire enterprise licenses and implement a multi-tier (i.e., gateway, e-mail server, and desktop) computer virus protection program. Implement automated e-mail attachment deletion at the gateway for high-risk malicious attachments (e.g., vbs, pif, shs, shb, vb, vbs, wsc, wsf, wsh, sct, hta, and selected exe files).

3.5.2.1.2.2.1 Target Completion Date for Initial License : September 2002.

3.5.2.1.2.2.2 New Resources Required:

$6.5M (up to $100 per seat) for FY 2002 and $300K annually, thereafter, to include installation and training.

3.5.2.1.2.3 (1.3). Implement HHS-wide round-the-clock monitoring and alerting system to identify security breaches (e.g., intrusion attempts, probing, scanning, denial of service attacks) and service disruptions with immediate alerts to incident response team personnel. Success in this endeavor is dependent upon implementation of an HHS managed security services. Emergency and routine reporting to HHS/OIRM, HHS/OIG, and FedCIRC as defined by applicable policy.

3.5.2.1.2.3.1 Target Completion Date: February 2002.

3.5.2.1.2.3.2 New Resources Required:

$7M annually and 9 FTE to staff the 24/7 HHS CSIRC.

3.5.2.1.2.4 (1.4.) Establish HHS-wide incident notification and response capability to restore critical services or mitigate further risk or damage from an event within 30 minutes of notification during work hours and within 1 hour otherwise.

3.5.2.1.2.4.1 Target Completion Date: February 2002.

3.5.2.1.2.4.2 New Resources Required:

Function can be performed with staff and funding allocated under the preceding bullet.

3.5.2.1.2.5 (1.5.) Engineer reliability into critical services (e.g., redundancy, automatic fail-over) and ensure contingency plans and disaster recovery capabilities (e.g., system backups, offsite storage, and hotsite facilities).

3.5.2.1.2.5.1 Target Completion Date: Will be determined in individual systems plans.

3.5.2.1.2.5.2 New Resources Required:

Since this is a cost that needs to be built into system replacement/upgrade strategy, it will be hard to factor out a specific cost. We can estimate for the enterprise that it will add ca. 5% as a general benchmark to the IT replacement/upgrade budget across the Department. Strategies should be developed for outside storage and consolidation of hotsite capabilities not mandated. Percentage used as the benchmark will vary OPDIV to OPDIV.

3.5.2.2 Goal 2: Protect the integrity and confidentiality of critical and sensitive HHS assets.

3.5.2.2.1 Performance Measure

No losses, unauthorized alterations, or unauthorized access to critical or sensitive HHS systems, data, or information.

3.5.2.2.2 Action Steps

3.5.2.2.2.1 (2.1.) Conduct independent enterprise-level IT infrastructure and cross-functional risk assessment for HHS.

3.5.2.2.2.1.1 Target Completion Date: June 2002.

3.5.2.2.2.1.2 New Resources Required:

$300K per OPDIV = $3.9M for initial year, $1.3M yearly, thereafter**.**

3.5.2.2.2.2 (2.2.) Conduct independent vulnerability assessments for one third of mission-critical systems yearly and prior to new or major modifications to systems.

3.5.2.2.2.2.1 Target Completion Date: Triennially (or upon substantive change to system during three year cycle) beginning FY 2002.

3.5.2.2.2.2.2 New Resources Required:

$10M per year**.**

3.5.2.2.2.3 (2.3.) Conduct independent penetration tests on one third of randomly selected HHS (including contractors performing HHS services) perimeter defenses and critical internal IT infrastructure and systems yearly.

3.5.2.2.2.3.1 Target Completion Date: September 2002.

3.5.2.2.2.3.2 New Resources Required:

$3M per year.

3.5.2.2.2.4 (2.4.) Establish corrective action plans addressing results from all assessments and tests and track to completion.

3.5.2.2.2.4.1 Target Completion Date: Ongoing.

3.5.2.2.2.4.2 New Resources Required:

$16M/year. Additional costs may be developed over time based on critical services needed and based on experience with second-generation outcomes**.**

3.5.2.2.2.5 (2.5.) Certify and accredit for security all mission-critical systems.

3.5.2.2.2.5.1 Target Completion Date: September 2004. All systems certified and accredited by September 2004 with one third completed in each of FY 2002, FY 2003, and 2004. This triennial schedule will continue thereafter with a substantial decrease in costs per year after FY 2004.

3.5.2.2.2.5.2 New Resources Required:

$10M/year through FY 2004. $2.5M/year thereafter.

3.5.2.2.2.6 (2.6.) Establish robust perimeter protections for all Internet access points into the HHS network by December 2001. In concert with network modernization, longer-term actions will establish sufficiently robust, secure, reliable, and consolidated Internet access, secure dial-up connections into the internal HHS network, and secure extensions of the HHS network to contractor networks and to the networks of other collaborating entities.

3.5.2.2.2.6.1 Target Completion Date: December 2001.

3.5.2.2.2.6.2 New Resources Required:

Though most OPDIV's have such protections now, costs to add or augment perimeter protections should be included in the Network Modernization effort.

3.5.2.2.2.7 (2.7.) Conduct daily vulnerability scans of critical systems. Serious vulnerabilities detected are corrected within 2 days. Periodicity: firewalls, external routers, public web servers, and internal critical servers - weekly, user account passwords - monthly.

3.5.2.2.2.7.1 Target Completion Date: June 2002.

3.5.2.2.2.7.2 New Resources Required:

To be determined. Though there are existing and ongoing efforts, there is a need to establish such scans as standard operating procedure throughout the Department and extend the requirement to include HHS contractors. It is important to note that there are complex issues regarding indemnification that may have substantial effect upon costs and that may jeopardize the target completion date.

3.5.2.2.2.8 2.8. Establish strong authentication requirements, e.g., one-time passcode, smart card, or biometric authentication, for authorized access to sensitive or critical systems, IT infrastructure services, and dial-in access to internal network.

3.5.2.2.2.8.1 Target Completion Date: March 2003.

3.5.2.2.2.8.2 New Resources Required:
$5.5M and 0.5 FTE per OPDIV plus OS.

3.5.2.2.2.9 *(2.9.) Establish encryption services for storage and transmission of all data and information deemed to be highly sensitive.*

3.5.2.2.2.9.1 Target Completion Date: March 2003.

3.5.2.2.2.9.2 New Resources Required:
To be determined.

3.5.2.2.2.10 (2.10.) Increase the training, education, and certification of security staff conducting security activities.

3.5.2.2.2.10.1 Target Completion Date: September 2002.

3.5.2.2.2.10.2 New Resources Required:
150 staff x $10K = $1.5M minimum annually.

3.5.2.2.2.11 *(2.11.) Provide security awareness training, materials, support, and activities (for example: Security Awareness Days) for all employees.*

3.5.2.2.2.11.1 Target Completion Date: All HHS employees trained by September 2002. Then, all retrained every year, thereafter.

3.5.2.2.2.11.2 New Resources Required:
$1.3M/year (65,000 employees at $20 per employee).

3.5.2.3 Goal 3: Ensure the authenticity and nonrepudiation of transactions.

3.5.2.3.1 Performance Measure

Trusted electronic relationships are used for all critical or sensitive transactions.

3.5.2.3.2 Action Steps

Timeframes and required resources for the following steps are covered in the paper describing the PKI initiative.

3.5.2.3.2.1 (3.1.) Establish HHS-wide PKI certificate authority.

3.5.2.3.2.2 (3.2.) Provide digital certificates to all HHS employees for sending and receiving secure e-mail.

3.5.2.3.2.3 (3.3.) PKI-enable external information collections.

3.5.2.3.2.4 (3.4.) PKI-enabled business transactions, e.g., procurements and grants.

3.5.3 Resources

See Chart on next page.

	7/30/2001	3:30PM							F.Cole			
GOALS	**Action Steps**	**Target Date**	**FTE**	**FY 2002 $**	**FY 2003 $**	**FY 2004 $**	**FY 2005 $**	**FY 2006 $**	**Comments**			
Goal 1												
	Step 1	Dec. 2001		TBD	TBD	TBD	TBD	TBD				
	Step 2	Sep. 2002		6.5	0.3	0.3	0.3	0.3				
	Step 3	Feb. 2002	9	7	7	7	7	7				
	Step 4	Feb. 2002							FTE and dollars included in Step #3			
	Step 5	Per Dev. Schedule							5% of IT upgrade budget/OPDIV			
	Subtotals			**13.5**	**7.3**	**7.3**	**7.3**	**7.3**				
	Total for Goal	**42.7**										
Goal 2												
	Step 1	Mar. 2002		3.9	1.3	1.3	1.3	1.3				
	Step 2	Begin 2002		10	10	10	10	10				
	Step 3	Begin Sep. 2002		3	3	3	3	3				
	Step 4	Ongoing		16	16	16	16	16	Additional cost may be developed with CAPs			
	Step 5	Begin 2002		10	10	10	2.5	2.5	One third of systems/year			
	Step 6	Dec. 2002		TBD	TBD	TBD	TBD	TBD	May be covered in Network Modernization			
	Step 7	Begin June 2002		TBD	TBD	TBD	TBD	TBD	Indemnification issues may affect costs			
	Step 8	Mar. 2003	7	3.43	1.02	0.35	0.35	0.35				
	Step 9	Mar.2003		TBD	TBD	TBD	TBD	TBD	To be determined			
	Step 10	Sep. 2002		1.5	1.5	1.5	1.5	1.5	150 FTE annually, $10k/person			
	Step 11	Sep. 2002		1.3	1.3	1.3	1.3	1.3	Entire HHS staff at $20/year/person			
	Subtotals			**49.13**	**44.12**	**43.45**	**35.95**	**35.95**				
	Total for Goal	**208.6**										
Goal 3	Resources required are covered in the PKI Initiative paper											
	Total for FY			**62.63**	**51.42**	**50.75**	**43.25**	**43.25**				
	Total FTE		**16**									
	Total $	**251.3**										

3.5.4 Methodology for Calculating Reliability Performance Measure

$$R = 100\% - \frac{(h*e(S1)+h*e(S2)++h*e(S3)+h*e(S4)+h*e(S5))}{2{,}847 Mehs}$$

R = % reliability
h = hours of service outage for a critical IT service
e = number of employees effected by outage
S = category of critical IT service
(WAN, Internet/web, mission-critical service, e-mail, telephony)
Mesh = million employee hours of service (maximum)
(65,000 employees x 24 hours/day x 365 days/year x 5 major IT critical services)

3.6 HHS PKI

3.6.1 Executive Summary

The HHS PKI initiative furthers the Department's IT goals and principles, notably in the areas of enterprise architecture, consolidation, and creation of a "one-Department" infrastructure. The establishment of a Department-wide PKI service, consolidating all existing non-unified PKI implementations, will provide the mechanism for secure transactions and communication among all HHS components.

Currently, there is a worldwide transformation in progress from paper-based commerce and interaction, to electronic commerce and interaction. This is true in HHS as well. Potentially, significant vulnerabilities exist in electronic commerce and interaction if security is not planned in advance and implemented carefully. To provide secure communications, HHS plans to implement a HHS Enterprise Certificate Authority using Public Key Infrastructure (PKI) technology.

A PKI implementation is a combination of Technology, Policies and Procedures, which supports digital signatures, discretionary encryption and other inherent PKI-Enabled security services.

A PKI enables users of an unsecured public network (such as the Internet) to securely and privately exchange data. This is accomplished through the use of a public and private cryptographic key pair (multiple key pairs are needed for both digital signatures and encryption) that is obtained and shared through a trusted authority. The PKI provides the means to identify an individual, device or an organization and a directory service that stores certificates used in this identity process.

PKI technology provides the mechanism for ensuring that electronic transactions are more secure than their paper counterparts. PKI offers the security services of confidentiality, authentication, integrity, and technical non-repudiation.

An essential component of PKI is a Certificate Authority (CA), which would be used to issue digital certificates to individuals, equipment and software. The HHS PKI will consist of a Root CA and Subordinate CAs.

This project will establish the HHS Departmental PKI.

3.6.2 Background

The American public relies on the U.S. Department of Health and Human Services (HHS) to administer a broad range of approximately 300 Federal program activities. Together with its many service partners, HHS delivers $238 billion dollars of health care services annually to 62 million people through its Medicare, Medicaid and Indian Health Service Programs. HHS also plays a vital role in ensuring safety, efficacy, and appropriate use of health care products; controlling disease and promoting health; advancing biomedical research; and assisting the poor.

HHS' service partners include States, universities, contractors and not-for-profit organizations. Together these activities are vital to the health and well being of the American Public, especially the elderly, children, and the poor. Taking account of private and public spending, the health sector constitutes a significant segment of the overall U.S. economy and looks toward the HHS to lead the future direction of these vital health activities.

Presidential Decision Directive 63 (PDD 63), "Critical Infrastructure Protection" requires each Federal Agency to develop a vulnerability plan, implement an infrastructure framework solution, monitor the enterprise infrastructure for vulnerabilities and respond to threats as appropriate.

To secure both internal and external electronic communications, HHS plans to implement an Enterprise Certification Authority using Public Key Infrastructure (PKI) technology. This will utilize an enterprise directory structure (described separately in the Enterprise Directory Plan). Additionally, the Government Paperwork Elimination Act (GPEA) requires that all agencies provide the capability for electronic commerce. PKI is an enabling technology, which is critical to closing this security vulnerability.

3.6.3 Goal

This project will establish the HHS Departmental PKI.

3.6.4 Scope

The HHS PKI will encompass all of HHS and will be available to support the business processes of HHS. It will serve subscribers (HHS employees, contractors, NIH Fellows, HHS Stakeholders) and relying parties (grantees, the general public, CMS service providers). An important aspect of this environment is that all interactions outside of HHS will occur through cross-certification of other PKIs with the Federal Bridge Certification Authority (Federal PKI Bridge). HHS does not plan to directly issue PKI certificates to the public or to business partners.

3.6.5 Strategy

The HHS PKI will operate under the HHS CIO Council. The activities and costs follow. In addition, a detailed cost estimate is attached.

3.6.5.1.1 FY 2001 Activities (Year 0)

A HHS PKI Working Group composed of representatives of various HHS Agencies was formed to begin the planning and development of the HHS PKI.

The primary activity of the PKI Working Group was the development of two documents, which will be the foundation of the HHS PKI. They are:

- ♦ X.509 Certificate Policy for the Department of Health and Human Services Certification Authority, and
- ♦ Public Key Infrastructure – Certification Authority Concept of Operations (CONOPS).

These documents are scheduled for release in September 2001.

3.6.5.1.2 FY 2002 Activities (Year 1) - $14,150,000

The HHS PKI oversight and operational organizations will be established. The HHS Root CA and its backup site will be built along with two Subordinate CAs. By the end of the year, after limited pilot testing, they will be operational and ready to issue certificates for supporting PKI-enabling applications. It is expected that the HHS Root CA will be cross-certified with the Federal PKI Bridge within the same time period. Identification, development and the start of pilot applications begin. PKI-enabling external information collection begins. Development of a migration plan for existing PKIs to move under the HHS PKI begins.

The HHS PKI Working Group will begin developing a strategy for servicing large numbers of non-HHS users.

3.6.5.1.3 FY 2003 Activities (Year 2) - $19,173,000

In FY 2003, four main areas of activity are planned:

- The HHS Root CA, its backup site and four Subordinate CAs are fully operational on a 24 x 7 basis.
- Existing high-priority applications begin to be PKI-enabled.
- Digital certificates are issued in large quantities to HHS Subscribers.
- A strategy is developed for migrating legacy HHS Agency PKIs that were independently developed to be under the HHS Root CA and the migration begins. This migration may involve either certifying an existing Agency CA under the HHS Root CA, or having a newly established Subordinate CA issue certificates to replace those issued by the legacy Agency CA.

Throughout the entire PKI development, there will be an ongoing review of technology as a part of the PKI life cycle under the HHS CIO Council, the HHS Certificate Policy Management Authority , and the Change Control Board.

In FY 2003 it becomes necessary that either the work being completed on the HHS Enterprise Directory be available to fully support the PKI activities, or as an alternative, a HHS Border Directory is established to support PKI along with other necessary functions.

3.6.5.1.4 FY 2004 Activities (Year 3) - $16,431,000

Two additional Subordinate CAs are operational for a total of six. Digital certificates continue to be issued in large quantities to HHS Subscribers. Most of these costs are the operational costs of the Root CA and six Subordinate CAs. Applications continue to be PKI –enabled.

Also, the ongoing review of technology as a part of the PKI life cycle continues. Appropriate developmental efforts and pilots are started and continue.

3.6.5.1.5 FY 2005 Activities (Year 4) - $16,994,000

Six Subordinate CAs continue operations. Virtually all of HHS' 65,000 subscribers have been issued digital certificates. Most of these costs are the operational costs of the Root CA and six Subordinate CAs. Applications continue to be PKI –enabled.

Also, the ongoing review of technology as a part of the PKI life cycle continues. Appropriate developmental efforts and pilots are started and continue.

3.6.5.1.6 FY 2006 Activities (Year 5) - $16,419,000

Six Subordinate CAs continue operations. All of HHS' 65,000 subscribers have been issued digital certificates. Most of these costs are the operational costs of the Root CA and six Subordinate CAs. Applications continue to be PKI –enabled.

Also, the ongoing review of technology as a part of the PKI life cycle continues. Appropriate developmental efforts and pilots are started and continue. Plans are in place for the replacement of the HHS PKI with the next life cycle of technology and the effort begins.

3.6.5.2 Budget

FY 2002	$14,150,000
FY 2003	$19,173,000
FY 2004	$16,431,000
FY 2005	$16,994,000
FY 2006	$16,419,000

3.7 HHS ENTERPRISE DIRECTORY

3.7.1 Executive Summary

The HHS Enterprise Directory initiative will consolidate the many disparate directory services currently in use in the Department, providing an essential piece of the enterprise IT infrastructure. This "one-Department" directory will unify the Department's directory of information about applications and users, which will simplify intra-HHS communication as well as clarify the HHS directory information access by the public.

With regard to current and past industry practices, the Department of Health and Human Services (HHS) operates numerous independent directory services for enterprise-wide directory lookup, agency directory lookup, and specialized application or operating system use. The pervasive nature of these independent directories is inefficient, wasteful, and subject to providing erroneous information due to decentralized control of data input, integrity checking, and replication. To mitigate these problems, enterprises such as HHS are implementing extensible and scalable enterprise directories to serve as a multi-purpose directory intended to replace current disparate directory services.

An enterprise directory provides a repository for applications and users to reference to learn details about users, equipment, and other objects. Inherently, this directory has the potential capability of reducing inefficiencies in data maintenance and increasing the quality of data, allowing HHS to save money, enable new applications such as Public Key Infrastructure (PKI), and provide users better information to increase the quality of service both inside the Department and to the American public.

An enterprise directory of the magnitude required for the Department of Health and Human Services is comprised of a set of technologies, software, policies and procedures that together provide the service and govern the access and operations of the directory. The eventual goal of a workable solution for the HHS enterprise directory will take significant time to implement and will have to be developed in phases.

The first phase is to prepare a directory for agencies based at the Washington, DC headquarters campus of HHS. This phase is critical to agencies currently operating on and seeking to migrate from Banyan Vines to a Microsoft Network Operating System. This phase is in progress and will be completed by September 30, 2001.

The second phase, to be conducted concurrent with the first phase involves convening representatives of all agencies within the department to research and plan implementation of an enterprise directory solution for the entire department. This phase is critical to the eventual deployment of an enterprise directory and services supported by an enterprise directory. This project will result in the selection of an enterprise directory platform and application package and a deployment plan and schedule. The phase will begin August 1, 2001 and will be completed on July 31, 2003, at which time the system deployment will begin. At the present

time, selection of an architecture and specific implementation cannot be completely assessed due at least in part to the lack of fully suitable software, systems, and tools. For this reason, no attempt was made to develop a cost of implementation for this phase.

The third phase supports the Department-wide deployment of PKI. PKI requires implementation of a Lightweight Directory Access Protocol (LDAP) capable directory in which to store the public certificates involved with PKI. Given the publicly accessible nature of this directory, it is advisable that this store be implemented as a border directory, which contains a limited set publicly available information to mitigate the risk of exposing critical information to the public. Metadirectory services will be used as a method of synchronizing data contained within this directory with internal HHS directory services. This project will begin August 1, 2001 and will be completed by September 30, 2002.

3.7.2 Background

The American public relies on the U.S. Department of Health and Human Services (HHS) to administer a broad range of approximately 300 Federal program activities. Together with its many service partners, HHS delivers $238 billion dollars of health care services annually to 62 million people through its Medicare, Medicaid and Indian Health Service Programs. HHS also plays a vital role in ensuring safety, efficacy, and appropriate use of health care products; controlling disease and promoting health; advancing biomedical research; and assisting the poor. HHS' service partners include States, universities, contractors and not-for-profit organizations. Together these activities are vital to the health and well being of the American Public, especially the elderly, children, and the poor. Taking account of private and public spending, the health sector constitutes a significant segment of the overall U.S. economy and looks toward the HHS to lead the future direction of these vital health activities. Presidential Decision Directive 63 (PDD 63), "Critical Infrastructure Protection" requires each Federal Agency to develop a vulnerability plan, implement an infrastructure framework solution, monitor the enterprise infrastructure for vulnerabilities and respond to threats as appropriate.

Currently the Information Technology industry is moving toward implementing single multipurpose directories in place of numerous special purpose directories. The Department of Health and Human Services intends to make this transition as well. The advantages of implementing enterprise directories include cost savings in directory operations and maintenance, data update, and data access by individuals. Included in these savings are the cost savings attributable to reduction of stale data.

HHS faces unique challenges in responding to Clinger-Cohen's IT architecture requirements. HHS is comprised of the Office of the Secretary (OS) and 12 HHS Agencies [formerly called Operating Divisions (OPDIVs)] whose missions, organizations, and technology platforms are distinct and diverse. Historically, these organizations and their IT infrastructures have evolved and operated autonomously. However, the growing dependence on IT, the complexity of technology, and Congressional drive to reduce IT operations and maintenance (O&M) costs requires that all Executive Branch agencies move towards greater coordination and cooperation among HHS Agencies.

These factors challenge the HHS to ensure that investments in infrastructures accomplish the intent of Congress and further the Department's capabilities to share and exchange information securely across the broad range of activities to fulfill the Department's mission.

3.7.3 Goal

This project will establish an HHS Department-wide enterprise directory structure capable of supporting HHS enterprise applications such as single sign-on, enterprise infrastructure management, and PKI.

3.7.4 Scope

The HHS departmental enterprise directory will serve the entire Department of Health and Human Services and will be available to support business processes both internal to the department and external to the public. Access to the data within the directory will be controlled based upon the sensitivity of the data. The directory will directly support the implementation of PKI.

3.7.5 Strategy

The HHS enterprise directory will be implemented as a three phase project. The phases include establishment of an enterprise directory for agencies headquartered at the HHS headquarters campus, planning for a HHS enterprise directory to include all agencies, and planning and implementation of a border directory to support PKI. A detailed view of the FY 2001, FY 2002, and FY 2003 activities is listed below. Also attached is a detailed budget estimate for FY 2004, FY 2005, and 2006.

3.7.5.1 FY 2001 Activities (Year 0) - $204,000

3.7.5.1.1 Phase 1

The principal activity in year one is preparing the department for implementation of an enterprise directory. Tasks include performing a directory pilot, researching existing directory infrastructure, and either creating or joining an HHS internal enterprise directory to facilitate migration from the Banyan Vines network operating system.

3.7.5.1.2 Phase 2

An HHS Directory Working Group comprised of representatives of various agencies within the Department was established to begin the planning and development of the HHS enterprise directory. Specific deliverables include establishment of goals for the HHS enterprise directory.

3.7.5.1.3 Phase 3

Begins in FY 2002

3.7.5.2 FY 2002 Activities (Year 1) - $2,900,000

3.7.5.2.1 Phase 1

The Headquarters Enterprise directory will be operational during FY 2002. Activities will include operations and maintenance of the Headquarters enterprise directory. Staff will review current and upcoming technologies for applicability to existing directory service.

3.7.5.2.2 Phase 2

The HHS enterprise directory group will perform the following planning tasks:

November 1, 2001	Establish high-level enterprise directory requirements.
January 31, 2002	Determine the directory architecture.
April 1, 2002	Define the system requirements.
June 15, 2002	Perform a market survey.
July 1, 2002	Draft a preliminary list of enterprise directory solutions.

3.7.5.2.3 Phase 3

The HHS enterprise directory group will perform the following planning and implementation tasks:

December 15, 2001	Design border directory.
February 28, 2002	Perform pilot test.
June 30, 2002	Implement border directory application.
September 30, 2002	Border directory in production mode.

In addition to implementing the border directory, content management methods and procedures will be developed in support of the directory.

3.7.5.3 FY 2003 Activities (Year 2) - $1,200,000

3.7.5.3.1 Phase 1

The Headquarters Enterprise directory will be operational during FY 2002. Activities will include operations and maintenance of the Headquarters enterprise directory.

3.7.5.3.2 Phase 2

The HHS enterprise directory group will perform planning tasks including:

November 1, 2002	Selection of HHS enterprise directory platform an software.
March 31, 2003	Perform pilot test.
June 30, 2003	Development of deployment plan and schedule.
July 31, 2003	Preparation of system procurement.

3.7.5.3.3 Phase 3

The border directory will be accessible by all agencies and will be maintained as a mission-critical service. Staff will review current and upcoming technologies for applicability to existing directory service.

3.7.5.4 FY 2004 Activities (Year 3) - $400,000*

3.7.5.4.1 Phase 1

The Headquarters Enterprise directory will be operational during FY 2002. Activities will include operations and maintenance of the Headquarters enterprise directory.

3.7.5.4.2 Phase 2

The HHS enterprise directory group will utilize the result of investigations to date to deploy the HHS Enterprise Directory. Upon deployment, agencies may begin joining the enterprise directory. The cost of this portion of the project deployment cannot be determined at this time and will require further evaluation at a later date.

3.7.5.4.3 Phase 3

The border directory will be accessible by all agencies and will be maintained as a mission-critical service. Staff will review current and upcoming technologies for applicability to existing directory service.

3.7.5.5 FY 2005 Activities (Year 4) - - $400,000*

3.7.5.5.1 Phase 1

The Headquarters Enterprise directory will be operational during FY 2002. Activities will include operations and maintenance of the Headquarters enterprise directory.

3.7.5.5.2 Phase 2

The HHS enterprise directory group will utilize the result of investigations to date to deploy the HHS Enterprise Directory. Upon deployment, agencies may begin joining the enterprise directory. The cost of this portion of the project deployment cannot be determined at this time and will require further evaluation at a later date.

3.7.5.5.3 Phase 3

The border directory will be accessible by all agencies and will be maintained as a mission-critical service. Staff will review current and upcoming technologies for applicability to existing directory service.

3.7.5.6 FY 2006 Activities (Year 5) - - $400,000*

3.7.5.6.1 Phase 1

The Headquarters Enterprise directory will be operational during FY 2002. Activities will include operations and maintenance of the Headquarters enterprise directory.

3.7.5.6.2 Phase 2

The HHS enterprise directory group will utilize the result of investigations to date to deploy the HHS Enterprise Directory. Upon deployment, agencies may begin joining the enterprise directory. The cost of this portion of the project deployment cannot be determined at this time and will require further evaluation at a later date.

3.7.5.6.3 Phase 3

The border directory will be accessible by all agencies and will be maintained as a mission-critical service. Staff will review current and upcoming technologies for applicability to existing directory service.

3.7.5.7 Timeline

See the Attached Schedule

Short Term

Project	Estimated Completion Date
Provide Directory Services for OS and other Agencies Moving off Banyan	September 30, 2001
Production Directory for OS and other Agencies	December 31, 2001

Long Term

Project	Estimated Completion Date
Complete Requirements for HHS Enterprise Directory	November 2001
Design Enterprise Directory Based on Requirements	December 2001 – March 2002
Proof of Concept for Enterprise Directory	February 2002 – May 2002
Pilots for Enterprise Directory	May 2002 – September 2002
Production Enterprise Directory	October 2002 – September 2004

3.7.5.8 Budget

FY 2001	$204,000
FY 2002	$2,900,000
FY 2003	$1,200,000
FY 2004	$400,000*
FY 2005	$400,000*
FY 2006	$400,000*

* The cost of this portion of the project deployment cannot be determined at this time and will require further evaluation at a later date.

3.8 ACCESSIBILITY FOR DISABLED SECTION 508

3.8.1 Executive Summary

This document outlines the HHS Overall Project Plan for complying with Section 508 of the Rehabilitation Act of 1973, as amended, throughout the U.S. Department of Health and Human Services (HHS) and its agencies.

Enforcement of the Section 508 standards began on June 21, with the acquisition regulations taking effect on June 25, 2001. Although attention to Section 508 compliance currently is focused on web sites, Section 508 covers all IT products, including documentation and support services. In some cases, there are no Section 508 compliant products in the commercial marketplace, but it is expected that these availability problems will be eliminated by 2003.

In order to ensure universal and consistent implementation of Section 508 throughout HHS, a HHS Section 508 Board will be established to provide guidance and assistance. Each Operating Division will appoint participants to this board. Each Operating Division will also establish a comparable Section 508 organization that will fine-tune the Department's guidance to fit within their mission and program requirements.

The HHS Section 508 Program will be based upon documented policies, guidance, and implementation plans and schedules that will ensure that HHS Electronic and Information Technology (EIT) assets are available to individuals with disabilities.

As new EIT items are procured and/or developed, and old EIT items are maintained and/or modified, they will be compliant. It is anticipated that all HHS EIT assets will be Section 508 compliant by the end of 2003.

3.8.2 Background

In 1986 Section 508 was added to the Rehabilitation Act of 1973. This version of Section 508 established non-binding guidelines for information technology accessibility. On August 7, 1998, the President signed into law the Workforce Investment Act of 1998 (P. L. 105-220), which included the Rehabilitation Act Amendments of 1998. These amendments significantly expanded and strengthened the information technology accessibility requirements in Section 508.
In the December 21, 2000, *Federal Register*, the Architectural and Transportation Barriers Compliance Board (Access Board) published the Electronic and Information Technology Accessibility Standards; Final Rule (36 CFR Part 1194). These standards were effective on June 21, 2001.

In the April 25, 2001, *Federal Register*, the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) published a final rule amending the Federal Acquisitions Regulations (FAR); Electronic and Information Technology Accessibility (48 CFR, Chapter 1, Parts 2, 7, 10, 11, 12, and 39). These regulations were effective on June 25, 2001.

Synopsis of Section 508 Requirements

Section 508 requires that, when Federal agencies develop, procure, maintain, or use electronic and information technology (EIT), Federal employees with disabilities have comparable access to and use of information and data as Federal employees who have no disabilities, unless an undue burden would be imposed on the agency. Section 508 also requires that individuals with disabilities, who are members of the public seeking information or services from a Federal agency, have comparable access to and use of information and data as the public without disabilities, unless an undue burden would be imposed on the agency.

Although Federal agencies have an explicit statutory obligation to make all EIT that they develop, maintain or use compliant with Section 508, the current emphasis is on newly procured EIT because it is the category that is explicitly enforceable by legal action. Procurement awards made on or after June 25, 2001, are subject to Section 508 (see FAR Final Rule). In addition, new or revised web pages, applications and databases posted on the Internet, Intranet or Extranet on or after June 21, 2001, must be Section 508 compliant. According to the Access Board, the Section 508 requirements do not apply retroactively to pre-existing EIT. However, the Department is making every effort to having electronic information accessible under Section 508, if feasible and practical.

Accessibility Requirements

Other Federal regulations and guidelines (e.g., Section 501 and Section 504 of the Rehabilitation Act) require equal access for individuals with disabilities. Therefore, Federal agencies are required to provide, upon request, information and data to individuals with disabilities through an alternative method of access that can be used by the individuals.

3.8.3 Goal

The goals of the HHS Section 508 Program include:
HHS WebPages that encountered 500 or more hits (accesses) per day will achieve 100% Section 508 compliance by December 2001.

3.8.4 Scope

Section 508 applies to all Departmental electronic and information technology developed, procured, maintained, or used by HHS beginning on June 21, 2001. This project plan itemizes the overall HHS timeline and milestones for implementing the Section 508 standards for EIT developed, procured, maintained, or used by HHS, as directed by 36 CFR Part 1194 and 48 CFR Chapter 1, Parts 2, 7, 10, 11, 12, and 39.

3.8.5 Strategy

In order to ensure universal enforcement of the Section 508 standards throughout HHS, a HHS Section 508 Program will be established. This program will be lead by the HHS Section 508 Coordinator, with the assistance of a HHS Section 508 Board. Each Operating Division will appoint a senior-level manager to lead the Section 508 program at their agency, and will designate two individuals to participate on this board.

The HHS Section 508 Board will provide guidance and direction for the HHS Section 508 Program and will review and make recommendations concerning Section 508 exception requests.

Each HHS agency will establish a Section 508 program that will fine-tune the Department's guidance and direction to fit within their individual mission and programs.

3.8.6 Timeline and Milestones:

Conduct Department of Justice Self-Evaluation of Top Web Pages…….	.4-20-01
Perform Information Dissemination and Training…….	6-01-01
Re-mediate Top 240 Web Pages	6-21-01
Develop Department Overall Implementation Policy	6-21-01
Develop Department Exception Process Policy and Guidance	6-21-01
Appoint HHS Operating Divisions' Single Points of Contact	7-31-01
Create a HHS Section 508 Board	7-31-01
Develop Implementation Plans and Schedules for Full Compliance	9-30-01
Develop Exception Process Plans	9-30-01
Review and Upgrade Complaint Procedures	9-30-01
Evaluate and Upgrade Procurement Policies and Procedures	9-30-01
Develop Section 508 Tracking System	11-30-01
Re-mediate All Frequent Accesses……	12-31-01
Department of Justice Biannual Report to Congress	08-07-03
Evaluate and Re-mediate Pre-existing Web Pages	12-31-03
Evaluate and Upgrade Software	12-31-03
Evaluate and Upgrade Telecommunications	12-31-03
Evaluate and Upgrade Video and Multimedia Products	12-31-03

NOTE: This is an on-going program that will repeat the schedule for 2003 in the out-years.

3.8.7 Budget

$200,000 per year Department-wide, and one FTE to handle administrative duties. These funds will cover special department-wide initiatives. The cost of Section 508 compliance is built into each Agency's base.

3.8.7.1 Assumptions

This project plan is based upon the following assumptions:

- Commercial technology is available to fulfill the mandates of Section 508;
- Existing HHS resources are used to implement the Section 508 standards and regulations;
- HHS employees receive the necessary training to become knowledgeable of the Section 508 standards; and
- HHS management supports the HHS Section 508 Program.

3.8.8 Section 508 Definitions

Information Technology (IT) – Any equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. It includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources. (This definition is identical to the definition of information technology in the Clinger-Cohen Act.)

Electronic and Information Technology (EIT) – Includes "information technology" and any equipment or interconnected system or subsystem of equipment that is used in the creation, conversion, or duplication of data or information. The term includes, but is not limited to, telecommunication products (such as telephones), information kiosks and transaction machines, World Wide Web sites, multimedia, and office equipment such as copiers and fax machines.

The term does not include any equipment that contains embedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, is not information technology.

Accessible – An information technology system is accessible to people with disabilities if it can be used in a variety of ways that do not depend on a single sense or ability. For example, a system that provides output only in audio format would not be accessible to people with hearing impairments, and a system that requires mouse actions to navigate would not be accessible to people who cannot use a mouse because of a dexterity or visual impairment

Undue Burden -- Significant difficulty or expense. In determining whether an action would result in an undue burden, an agency shall consider all agency resources available to the program or component for which the product is being developed, procured, maintained, or used.

3.9 Public Web Portal

3.9.1 Background

Public web sites have become one of the most powerful customer service tools for federal agencies, like HHS, to provide a direct path between the American people and their government. This initiative furthers the Department's IT goals and principles notably in the areas of access in the public's assess to information. The use of web-based technologies must adhere to statutory requirements that focus on security and privacy such as GISRA and HIPAA or policy directives such as OMB A-130 and PDD-63. At the same time, there is a need on the part of HHS and other agencies to link the use of information technology to achieving program objectives that support its mission. Drivers for this work stem from statutes such as GPRA , Clinger-Cohen, GPEA, and PRA). The HHS Public Web Portal will provide a consistent enterprise customer-centric focus that operates effectively within the HHS information security and critical infrastructure framework.

This strategic plan presents specific goals, performance measures, and action steps to focus activities and investments to advance HHS reach to and interaction with the American people. The plan identifies priority actions to achieve measurable objectives that support the vision statement and outlines areas where the HHS Web Portal must rely upon and integrate with other major information technology focus areas for both planning and implementation. Projected resource estimates are based upon selected agency experience and require analysis and validation for the larger HHS enterprise context.

3.9.2 HHS Web Portal Vision

Providing a Citizen-Centric HHS Public Web Portal Supporting a Direct Path for the American People

Note: The web portal citizen-centric focus is defined as having a programmatic link to health initiatives for improving and expanding access to quality health care and human services initiatives for increasing support for America's children and families.

3.9.2.1 Cost FY2001 – FY2004: $850,000

3.9.2.2 Goal 1: Improve availability and delivery of web portal information, products, and services

3.9.2.2.1 Performance Measure:

HHS Web Portal content is delivered to the right audience at the right time with a 90% confidence level.

3.9.2.2.2 Action Steps:

3.9.2.2.2.1 Identify web portal audience(s) and potential audiences to extend our reach to Americans needing access to quality health care or support for children and families using professional market research techniques.

3.9.2.2.2.1.1 Target Completion Date: December 2001

3.9.2.2.2.1.2 New Resources Required: $55, 000

3.9.2.2.2.2 Gather baseline data to develop metrics and verify assumptions about audience needs and preferences to establish a citizen-centric public web portal using trend analysis and focus group research techniques.

3.9.2.2.2.2.1 Target Completion Date: April 2002

3.9.2.2.2.2.2 New Resources Required: $50,000

3.9.2.2.2.3 Formulate requirements for web portal information content, products, and services gathered from market research, trend analysis, and focus group research, and establish test criteria for measuring web portal performance to ensure that content is delivered to minimize excessive wait time.

3.9.2.2.2.3.1 Target Completion Date: October 2002

3.9.2.2.2.3.2 New Resources Required: $97,000

3.9.2.2.2.4 Establish a web portal content discovery, integration, management, and delivery strategy to make content available that is supported by an automated object-oriented and database-driven technology.

3.9.2.2.2.4.1 Target Completion Date: February 2003

3.9.2.2.2.4.2 New Resources Required: $ 150, 000

3.9.2.2.3 Total for Goal 1: $352,000

3.9.2.3 Goal 2: Ensure usability and accessibility of web portal information content and products

3.9.2.3.1 Performance Measure:

HHS Web Portal content is delivered in the right format and is usable and accessible to 100% of portal visitors.
Note: this performance measure links to the Section 508 goal, performance measure, and action plan.

3.9.2.3.2 Action Steps:

3.9.2.3.2.1 Develop a comprehensive citizen-centered Web portal. Evidence-based design practices for creating a consistent department "look" will be gathered by conducting structured usability and accessibility studies. The presentation of content provides universal access to publicly available information that is searched and filtered to meet specific topics, questions, or need. NIH NCI has established these usability and accessibility guidelines for HHS at www.Usability.Gov based on empirical research.

3.9.2.3.2.1.1 Target Completion Date: August 2002

3.9.2.3.2.1.2 New Resources Required: $100,000

3.9.2.3.2.2 Integrate baseline information and analysis for expanded services that leverage database-driven content, customized/personalized content delivery, and access to online services. Conduct usability studies to evaluate design changes that support expanded services. Leverage existing database-driven dynamic web systems (i.e. OIRM, HRSA) content delivery and usability testing centers (NIH NCI Usability Center) already implemented and researched.

3.9.2.3.2.2.1 Target Completion Date: August 2003

3.9.2.3.2.2.2 New Resources Required: $85,000

3.9.2.3.2.3 Establish secure and private self-identification customization where citizens may create personalized Web interfaces to help follow specific topics/questions over time, and to manage complex or multiple step processes or situations until they are resolved. Note: these sites must comply with OMB "cookie" requirements, the Paper Work Reduction Act, and System of Record requirements.

3.9.2.3.2.3.1 Target Completion Date: September 2004

3.9.2.3.2.3.2 New Resources Required: $100,000

3.9.2.3.2.4 Integrate compliance with Section 508 of the Rehabilitation Act into the design strategy of the web portal. Maintaining compliance over time will be accomplished with periodic content reviewing, archiving or disposing of content, and using tools for developing new content that is compliant. The HHS Internet Information Management Committee has established a checklist for section 508 compliance. All OPDIVs are responsible for Section 508 compliance.

3.9.2.3.2.4.1 Target Completion Date: December 2003

3.9.2.3.2.4.2 New Resources Required: $98,000

3.9.2.3.3 Total Goal 2: $383,000

3.9.2.4 Goal 3: Promote public trust with secure and private web portal services

3.9.2.4.1 Performance Measure:

Zero tolerance for the mishandling or misuse of personal information or unauthorized access to web portal information, products, or services

Note: this performance measure is guided by the information security strategic plan. As the portal moves beyond basic universal access to publicly-available information and adopts customization, automated content updating, and access to on-line services, adherence to the information security plan for incidence response and critical infrastructure protection is required.

3.9.2.4.2 Action Steps:

3.9.2.4.2.1 Conduct a security review to ensure that personal information is not gathered to provide broad universal access to publicly available information that is searched and filtered to meet specific topics, questions,

or need. This will be conducted in conjunction with OIRM to ensure proper system of record and privacy regulations are applied.

3.9.2.4.2.1.1 Target Completion Date: March 2002

3.9.2.4.2.1.2 New Resources Required: $5,000

3.9.2.4.2.2 Conduct a security risk assessment and develop a plan to ensure that personal information is protected during broad category customization based upon anonymous self-identification and corresponding presentation of content that is delivered for the duration of a Web session.

3.9.2.4.2.2.1 Target Completion Date: March 2003

3.9.2.4.2.2.2 New Resources Required: $45,000

3.9.2.4.2.3 Conduct a risk analysis and develop a plan to ensure protection of personal information and secure channel authentication for self-identification customization where citizens may create personalized Web interfaces that would persist and be made available on subsequent portal visits. The HHS PKI solution is a prerequisite.

3.9.2.4.2.3.1 Target Completion Date: March 2004

3.9.2.4.2.3.2 New Resources Required: $65,000

3.9.2.4.3 ***Total Goal 3: $115,000***